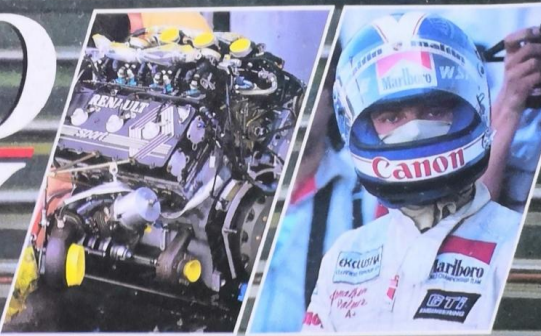


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FORMULA ONE

Interseason happenings

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APRIL 1986

PAGE 4

PADDOCKS

Warwick goes to Jaguar. Mercedes in Endurance. Daytona 500. Lancia at Paul Ricard and all the latest racing and rallying news.

PAGE 16

GRAFFITI

Graffiti on Jim Clark, on the latest FISA regulations and Ford's welcome return to Formula 1. Thoughts too on the latest from Brabham.

PAGE 18

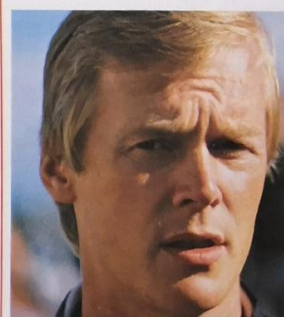
PROFILE

Britain's Johnathan Palmer talks to Mike Doodson about his past, present and future before taking off for Portugal for testing with Zakspeed.

PAGE 28

INTERSEASON HAPPENINGS

A day by day account of the traditional close-season activities plus photos of the latest cars and engines.



PAGE 48

INSIGHTS

An eye-opening look at the role of money in your favourite sport: Who pays what, who earns how much and how to finance your next season in F1.

PAGE 62

RALLYING

Details on the driver walk-out on the Rally of Portugal and thoughts on where the tragic spectator accident leaves rallying today.

PAGE 84

INTERVIEW

Ari Vatanen explains how his life has changed since his accident in Argentina last year. The situation is at status quo for the moment but the ex-World Champion looks forward to when he will be able to drive again.

You will find
the GPI subscription coupon
on page 90

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P A D D O C K S

TOPICS

KOUROS/MERCEDES IN ENDURANCE

De Cesaris put in some private testing with the Minardi at the Fiorano circuit at the beginning of March. With 1m 08.7s after only 8 laps, he equalled Johansson's best time there in 1985. Record for the Ferrari circuit remains Alboreto's 1m 04.92s.

Staying with Minardi, the F3000 car has been undergoing testing at Misano with Aldo Bertuzzi. Best lap for the session was a 1m 17.2s with the new Lamborghini V8.

In a recent interview, Nelson Piquet who has left Brabham for the Williams-Honda team admitted that he was glad he wasn't going to have to drive the BT55 which he judges dangerous. "Patrese and De Angelis are going to have a difficult season," he added.

Canadian driver, Bertrand Fabi, died in a tragic accident at Goodwood during testing of his Ralt RT30/VW in February. European and British FF2000 Champion in 1985, Fabi was one of the main favourites of this year's British F3 series with G. Bennet's West Surrey Racing team. Aged only 24, he will be a great loss to Canadian motorsport and racing in general.

An interesting newcomer to the World Endurance Championship scene in 1986 was recently presented in Paris. The man behind the new team is none other than Peter Sauber, who has managed to gain the financial support of Yves Saint Laurent perfumes for his Mercedes-engined sports car. After Jaguar, it will be the second outfit to attempt to break Porsche's supremacy.

Sauber has been involved in Endurance Racing for a number of years now, starting with the Ford- and then Porsche-engined SHS C6 in 1982. A year later, the C7 appeared with BMW M1 power. Sauber then started looking for a replacement engine for his chassis and, eventually, found his saviour in Stuttgart, in the shape of the 5 litre V8 from the Mercedes 500. The idea is to use the block lightly turbocharged with turbo-pressure not exceeding 0.3 / 0.4 bars. After much private testing, the Sauber-Mercedes was due to make its debut appearance at the 1985 Le Mans 24 Hours. Unfortunately, a spectacular accident, that saw Nielsen take off on the Hunaudières straight during practice, put an end to that plan.

It would appear that around that time Yves Saint Laurent, through the intermediary of the



MacCormack Group, were looking to get involved in motor racing to promote their latest Kourois range of eau de toilette for men and eventually the choice fell on the Swiss/German Sauber team. Although not everybody within the German company agrees with the project, apparently Mercedes were not inactive in getting the deal together, but Henri Pescarolo did point out that "if Mercedes did want to become involved in motorsport again, they would most definitely not need the likes of Sauber to do so."

Indeed, the car will be privately prepared but certain personalities from Mercedes will be following the project more than closely. The programme should take in Monza, Silverstone, Nürburgring and Spa with one car

whilst the plan is to line up two cars for the Le Mans 24 Hours. The official drivers will be Frenchman, Henri Pescarolo and Dane, John Nielsen. The names of the drivers for the second car are, as yet, unknown. For the moment, five chassis have been built and Peter Sauber will take along two to each 1 000 km race. The new team, Kourois Racing, has undergone testing at Zeltweg, Hockenheim and Monza with Nielsen at the wheel and the Dane has been able to make direct comparisons with the Jaguar XJR6 he drove in Malaya. According to him, the Sauber is better than the British car. Technically, nothing has yet been finally decided upon following Peter Sauber's recent signing of a contract with Goodyear for radial tyres.

BEST PHOTO

Patrick Behar's pic of Patrese and Piquet's tangle on last year's Monaco GP was recently selected as best sports photo of 1985. The jury, composed of journalists and sportsmen, chose between 450 candidates in the colour category of the Martini-sponsored competition. Those of you with a good memory will recall that GPI featured the photo in our Monaco report (No. 93). Proof of our fine judgement?



P A D D O C K S

LANCIA AND WALTER BRUN AT PAUL RICARD

Two major Endurance teams took over the Paul Ricard circuit for a week to get ready for 1986 and to test the Michelin tyres that both teams will be using over the months to come.

Preferring to concentrate their resources on their World Rally Championship programme, Lancia will only be running a reduced effort in Endurance this year and only three short races have been selected by the Italian team, Monza, Norisring and one yet to be announced. Only one car will be entered, crewed by Andrea de Cesaris and Alessandro Nannini, but Lancia will be looking to maintain development of the car throughout the year during private testing with particular attention to the mechanicals.

De Cesaris and Nannini shared the driving of the two test cars at Paul Ricard and Lombardi, technical manager present at the circuit, explained "On chassis number 6 we have been trying out a new motor which is 40 bhp more powerful than last year's whilst, at the same time, we have been looking for ways of reducing fuel consumption. During the winter, we have developed a new electronic injection system

which has given satisfactory results. Another job has been to try different sized Michelin tyres, especially at the front, in an effort to reduce over-steer. There too we have made progress.

On chassis number 7, we have been looking to reduce turbo-lag, and we have tested a Thorsens differential as well as a new exhaust which no longer exists at the sides of the car but between the wheels at the rear. For Monza, the cars will weigh in at the exact minimum allowed by the regulations (850 kg), a gain of 20 kilos over last year."

The two cars put in about 950 km and, with chassis number 6, de Cesaris managed 1m 09.33s and Nannini 1m 09.48s.

The Walter Brun team had gone to the south of France primarily to continue tyre tests with Michelin. Thierry Boutsen put in about 400 km on the small circuit with a fastest time of 1m 09.00s.

Brun will be taking two cars, sometimes three, to all rounds of the World Endurance Championship (two 962s and one 956) with Larrauri, Sigala and Boutsen as drivers and possibly Bell and Stuck if the Porsche factory does not go to all rounds.



US SPECTATOR FIGURES UP

Statistics recently released by Goodyear show that motorsport is becoming increasingly popular in the United States. 1985 attendances were nearly 503,000 up compared with 1984 and the total for the thirteen major series taken into consideration was 6.98 million. NASCAR remains the most popular and accounts for 2.12m of that figure, an

average of 75,000 per meeting for the 28 event calendar. CART follows with 1.4 m spectators, of which 350,000 turned up for the Indianapolis 500, an average of 86,000 per meeting. IMSA's figures continue to increase with a total of 668,000 for the 17 races (39,000 average), a jump of over 120,000 over '84.

WELCOME BACK!

After a nail-biting delay of three months, Ford's new F1 turbo 1500 cc engine made its first public appearance on February 28, when it completed 50 laps of Snetterton.

While this will have come as a relief to the members of the Lola-Force team who have been waiting anxiously for it to be ready, it will also be soothing news to everyone in F1 racing. Without the 3-litre Ford-Cosworth DFV engine which raced from 1967 to 1985, Grand Prix racing would not enjoy the huge audiences and related sponsor appeal which it enjoys today. The trusty V8 powered its first world champion to his title in 1968: indeed, over a period of 14 consecutive years, only two men acceded to the title without this amazing engine behind them. Some observers have suggested that the dominance of this one engine left F1 racing technically stagnant. Others would argue that it enabled many more designers to demonstrate their ability than would have been possible if a competitive « universal » engine had not been available. Spectators certainly benefited from a long period of intensely close and competitive racing.

Welcome though the F1 racing activities of major manufacturers have been in the past nine years, their participation has tended to destabilize F1. The withdrawal of two of them at the end of last year has certainly contributed to the current situation in which some worthy drivers face the new season without a Grand Prix place.

Ford returned to F1 for reasons which transcended the somewhat exploitative attitude of certain rivals. During the early period when there were not enough DFVs to go around, the company allocated units for benign rather than purely commercial reasons. When a rival engine appeared to be gaining a power advantage, development funds were quietly made available to improve the power of the DFV.

For this reason we welcome Ford back to the fold. The company's management has emphasized its intention, if possible, of repeating the exercise which brought it so much kudos in 1967. In due course, the exciting little V6 with its sophisticated electronics will become available to more than one team. If the price is right, then Ford could once again find itself the saviour of F1 racing, this time by enabling smaller teams to compete against the huge corporations whose wealth and technical resources have made Grand Prix sport regrettably one-sided in recent years.

In the words of the song, it's so nice to have you back where you belong.

GPI.

TOPICS

Alan Jones and Patrick Tambay's Beatrice-Lolas will carry the BP logo during 1986, marking the return to F1 for the British petrol company.

Franks Williams has recently recruited two engineers, both Argentinians. They are Enriquez Scalabrini, ex-Dallara, and Sergio Rinland, ex-RAM.

Bob Wollek and Paolo Barilla scored another IMSA success by taking victory at the Miami 3 Hours. Their Porsche 962 beat the similar cars of Sullivan/A.J. Foyt and Stuck/Garner by 29s and 1 lap respectively. Haywood and Redman took their Jaguar XJR-7 to fourth place, a lap behind Wollek.

Jochen Mass was unable to compete in the Miami 3 Hours after his accident in the Daytona IROC race where he suffered a fractured collar-bone and twisted knee.

Following New Man's decision to put a halt to their sponsorship activities in Endurance, Joest Racing is currently looking for a new backer. R. Joest is looking to do a reduced programme in 1986 with Ludwig, Barilla and "Winter".

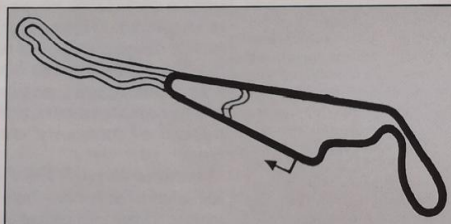
Huer will be making a return to F1 this season after leaving the sport in the seventies. Thanks to the intervention of Mansour Ojeh (TAG), the Swiss company will be present in the McLaren stands.

Christian Danner's fellow driver at Osella will finally be Ghinzani, not Capelli as first thought.

A NEW LOOK FOR PAUL RICARD

Although at time of going to press it is still uncertain which of the two major circuits in France will host the 1986 French GP, it looks more likely that Paul Ricard will be chosen following a meeting with FFSA and FOCA. It would appear that the Preno circuit near Dijon no longer meets the requirements for F1 but, unless the real reason lies elsewhere, there seems to be a lot of fuss being made about the swap over to another circuit. The fact that Dijon was going to be a FOCA organised affair whereas Paul Ricard is private could explain the commotion. Nevertheless, it is likely that the parties involved will be able to come to an agreement by which

the interests of each will be protected. If that does happen, Paul Ricard will be guaranteed the running of the French GP for the next five years which will allow them to invest in improvements to the circuit. In addition to the existing 3,300m, 2,200m and 5,800m circuits they will cut across the latter to make a fourth possibility of 3,800m. An interesting hairpin will result from this modification and the classic 1,900m straight will be shortened to 1,100m, not a great loss for spectators. Sponsors and track-side advertisers should be happier too. Their names and colours will pass 70 times in front of the TV cameras instead of 50!



Paul Ricard: the former and proposed circuits are picked out in white and black respectively.

TIMES AT PAUL RICARD

3.3 km circuit: Tambay (Lola/Ford), 1m04.9s; Jones (Lola/Hart), 1m06.8s.
5.8 km circuit: Piquet (Williams/Honda), 1m31.8s; Arnoux (Liger/Renault), 1m34.1s; Tam-

bay (Lola/Ford), 1m36.2s; Mansell (Williams/Honda), 1m36.5s; Jones (Lola/Ford), 1m39.12s; Jones (Lola/Hart), 1m42.33s; Tambay (Lola/Hart), 1m42.66s.

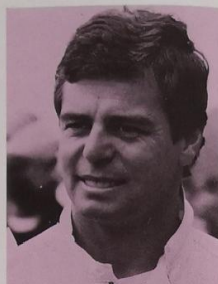
PIQUET IN FRANCE

Williams, Lola and Liger were all at Paul Ricard in early March for private testing. The British team had brought along a FW11 (N° 2) for Piquet and a FW10 for Mansell, the former's main task being to sort out the brand new chassis and to carry out long distance fuel consumption tests whilst Mansell was there for engine testing in general, particularly of the new VGS (Variable Geometry Scroll) turbo, an electro/pneumatically controlled regulation of the quantity of compressed air, doing away with the need for a waste-gate.

Liger were present at the same time as Williams, Arnoux trying

out the JS27 N° 2 (N° 1 was still being rebuilt in Brazil after being damaged by fire). The Frenchman was very impressed by Piquet's time with the Williams, 1m 31.8s (on soft rubber) compared with last year's pole position time of 1m 32.45s set by Rosberg. "Partial times on the twisty part of the circuit showed that Nelson and I were very close. However, he was over 2 seconds a lap faster," pointed out Arnoux. "Consequently, we set out to check the top speed of the Williams: 330 kph for him, 307 kph for me! Proof that it's not the chassis that's responsible for Piquet's time."

WARWICK WITH JAGUAR



Victim of the recent clash of interests in the Lotus F1 team, Derek Warwick will be turning his talents to Endurance Racing in 1986 and will be leading driver in Tom Walkinshaw Racing's Jaguar team. The ex-Renault man's first contact with IMSA was last year's Daytona 24 Hours race at the wheel of a Porsche 962.

Warwick's partner in the XJR6 will be another ex-Renault driver, Eddie Cheever, who took part in some Endurance races a few years ago with the Lancia team. The second car will see former Italian F2 ace, Gianfranco Brancatelli, back in the limelight alongside Frenchman Jo Schlesser.

RONDEAU TROPHY

Following the untimely death of the former Le Mans winner, the organisers of the classic French race have decided to create a trophy in honour of Jean Rondeau. The ACO will award the "Jean Rondeau Trophy" to the driver who puts in the fastest time during practice of the 24 Hours race. Furthermore, as a tribute to the talented engineer, competitors will do a lap of honour before the start of this year's race and the Yves Courage Club has asked that the Le Mans council name a street in his memory.

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"WORLD CHAMPION" by Alan Fearnley

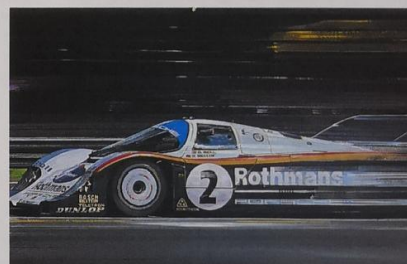
Lauda at Estoril 1984 where he became World Champion. Each print individually signed by the artist, three times World Champion Niki Lauda, Ron Dennis and John Barnard of McLaren International. Price: £65.00 unframed £90.00 framed.



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"CHAMPIONSHIP CHALLENGER" by Alan Fearnley

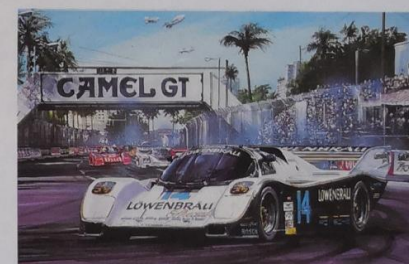
Prost winning the 1984 European GP — Nurburgring. Each print individually signed by the artist and Alain Prost. Price: £37.50 unframed £62.50 framed.



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NEW FORD SHOWS PROMISE



The latest Ford F1 engine was first seen at Boreham, then at Donnington before being officially presented at the Geneva Motor Show. Next engagement for the Lola/FORCE/Haas team was a test session at the Paul Ricard circuit in the South of France in March with a view to checking on the performances of the V6 engine on a genuine F1 circuit. Just as impatient, if not more, was Patrick Tambay who does not really want to start the new season with the Hart engine but wants to know more about the potential of the latest Cosworth.

After the two days at Paul Ricard, the times recorded with the Lola went a long way to putting the former Renault man's mind at rest. A 1m 05.2s on the 3.3 km circuit and 1m 36.2s on the 5.8 km circuit are more than satisfactory. The smile on Tambay's face when he learned that he had just wiped 3.7s off the 1985 pole position time was something not to miss.

The principal difference between 1985's THL1 and this year's THL2/86 are of course the V6 engine but also a new rear suspension. The bulk of the Lola has also been reduced thanks to the compact 120° V engine. The

radiators and intercoolers are as slim and discreet as on the Honda Williams and, also like the Honda, the Ford makes wide use of materials especially suited to the dissipation of excess calories. Bodywise, the Lola has also changed. The engine cover is lower and more rounded whereas the sidepods are about four inches lower.

The testing went off without incident and Tambay was particularly encouraged. "We came along with three of the fifteen Cosworths already produced, each slightly different," explained Tambay. "The first put in over 500km and the other two put in the distance of a GP without a hiccup, just like clock-work..."

Tambay was asked not to push the car too hard. The priority for the Cosworth and Ford USA engineers, is to verify that the design is sound. They will be able to worry about getting maximum performance out of

the block later. In France, turbo pressure did not exceed 3 bars and not too much was asked of the electronic management system. Less power, but less potential problems too.

"We slowly increased turbo pressure," admitted Tambay, "in order to see what would happen, and to find out a bit more about the engine. However, we didn't do any consumption tests. The Ford people are extremely patient and, when I asked when they thought the new engine would race for the first time, they simply replied that they will wait until everything is ready. I'll have to be satisfied with the Hart at least until Monaco or Spa... at the earliest."

Ford's way of going about things recalls Honda's preliminary work with Spirit before joining up with Williams. It is very unlikely that Ford abandon Lola but the V6 will probably end up on the open market, just like the V8 Cosworth in the past.

BODINE AT DAYTONA



A number of new cars made their maiden appearance on the Daytona 500, opening round of the NASCAR Grand National series. Pontiac (GP 2+2), Oldsmobile (Delta) and Chevrolet were all out to challenge the supremacy of the Bill Elliott/Ford duo.

Three drivers, Bodine, Bonnett, Earnhardt, all in Chevrolet

Monte Carlos, were quick to break away from the pack and by mid-distance the trio had built up a comfortable lead. Then, whilst leading, Bonnett was forced to call in at his pits with transmission problems. After repairs, as he tried to catch up with Bodine and Earnhardt, his Chevrolet span taking a number of competitors with it, includ-

ing Elliott.

Out in front, Bodine and Earnhardt were left to fight it out, the lead changing hands on a number of occasions but, just three laps from the finish, Earnhardt's engine blew. Bodine's victory in the 200 lap race was only the fourth in the 36-year-old driver's career but something tells us it won't be his last!

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FRANK WILLIAMS IN ACCIDENT

Frank Williams had come along to Paul Ricard to follow Mansell and Piquet's testing of his latest single-seater. On Saturday evening he was in the stands, still enthusing over Piquet's time. "Are we going to win the championship in 1986? Everybody's saying so. Personally, I prefer to wait until the end of Rio to see what happens. I never like predictions. I know how much progress Honda and ourselves have made, I don't know about the others." Fifteen minutes later, he climbed into his hired Ford Escort and drove off in the direction of Nice to get the next plane back to London in the company of his press attaché, Peter Windsor. Just before the small village of

Méounes, Williams was caught out by a bend which tightened more than the others and the car went off the road. The emergency services of the Paul Ricard circuit were rapidly on the scene and Lafitte, Piquet and Mansell followed. The car had ended up about 100 yards off the road and Peter Windsor, frightened that the car might explode, pulled Frank away from the vehicle. Windsor was unhurt in the accident but Frank Williams was taken straight away to Toulon hospital, before being transferred by helicopter to Marseilles. Despite an operation to the spinal cord, Williams is without the use of his legs at present.

NO SPRINGS FOR THE RENAULT V6

Pre-season testing at Rio allowed us to get our first look at the latest developments on the Renault F1 engine. The major changes for the V6 EF 15 concern the introduction of a revolutionary timing system and modified ignition.

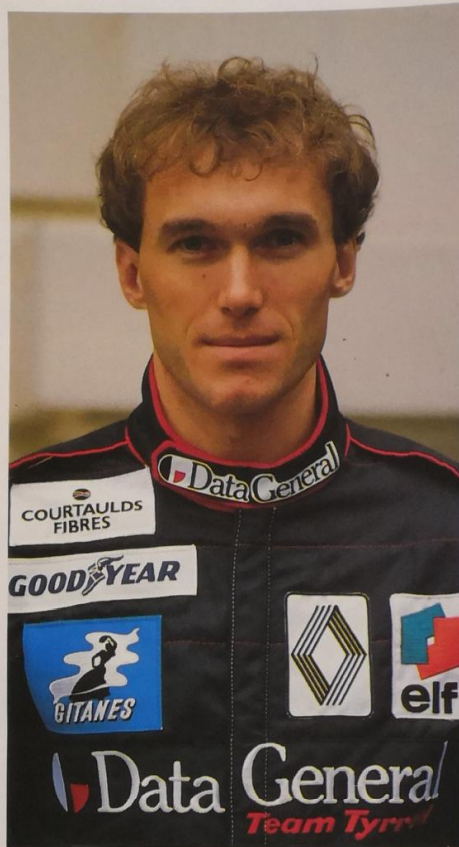
The new timing can be considered to be desmodromic in that it does away with the need for valve springs but Renault have completely revised the concept for their V6. A true desmodromic system necessitated the addition of a second rocker, one to open the valve and one to close it again. It was basically a mechanical system which presented very few advantages but had the disadvantage of being marginally heavier than a classic arrangement.

Renault's innovation lies in the fact that the redundant springs are now replaced by tiny pistons mounted in the axis of the valves and activated by a 1/2 litre bottle of compressed nitrogen which is tucked away in the 'V' of the engine. The nitrogen circuit is controlled by the cam-shafts and the solution offers a number of advantages: a small weight saving of around 1 1/2 kg, it is less bulky, more reliable and, probably most important of all, eliminates stresses which valve springs cannot resist and which

necessitate the limiting of engine revs. The French manufacturer's invention (patented for production cars but free to be copied in the world of motorsport) is likely then to result in much higher engine speeds. "We have already gained 1000 rpm," confirms a Renault engineer. "The limit has gone from 11,500 rpm to 12,500 rpm but we believe we will be able to go much further." A higher revving engine, however, means higher fuel consumption, so it looks as though the new principle will mainly come into its own during qualifying where fuel consumption is not restricted.

It is interesting to note that Renault first started looking at the possibility of using desmodromic timing during 1983 when their F1 cars experienced a series of valve spring problems. However, the Régie resolved their problems otherwise and the desmodromic project was shelved which explains how they have been so quick in introducing the concept today.

The problems which affected both the Lotus and the Ligier cars during the interseason were in no way due to these latest modifications. A faulty series of piston rings would appear to have been at fault.



STREIFF WITH TYRRELL

When Guy Ligier opted for René Arnoux at the beginning of the year, after Dumfries was recruited as Senna's partner with Lotus and when Cheever was announced as driver of the second Tyrrell, Philippe Streiff must have felt his chair being pulled from underneath him each time. On Thursday, March 13th, however, Ken Tyrrell officially announced that the Frenchman would be driving for his team in 1986 after all, and that Eddie Cheever had sportingly stepped down. "We have been interested in Philippe since the middle of last season and I was impressed by his performance at Brands and on the Australian GP, despite his collision with Lafitte," affirms Tyrrell.

There will be no official distinction between Martin Brundle and Streiff within the British team even if Brundle's two years with Tyrrell put him in a slightly stronger position psychologically. "My contract is for one year," pointed out a very relieved Streiff, "but I have an option for 1987 and 1988. It's up to me now to prove that I merit a permanent place in F1." Ken Tyrrell has asked Streiff to concentrate his activities on Formula 1, a similar condition accepted by Brundle. As a result, the French driver will no longer take part in the Le Mans 24 Hour race in the Blanchet Locatop sponsored Porsche 962 as planned.



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MARC SURER IN CORSICA?

Marc Surer's interest in rallies is nothing new. In fact the Arrows F1 driver has competed in 10 events since 1983, mostly with a Renault 5 Turbo. Best result to date was a third place on the Rallye du Valais in Switzerland. Indeed, at one moment Surer turned his back on his F1 colleagues to plan a season with a Peugeot 206 T16 but the project fell through at the last minute and the hapless Swiss driver found himself unemployed, apart from a few Endurance races with the Kremer brothers, before replacing Hesnault at Brabham.

Today it would appear that Surer's desire to get behind the wheel of a top-notch rally car is as strong as ever and it is likely that he will be driving a Ford RS200 in selected events where his Arrows F1 programme allows. A number of top European Championship events are planned including Madeira (early August) and the Manx (mid-September) whereas highlight of the year will be Corsica at the beginning of May, where Surer will be part of the works team.

No less!



HAPPY FAMILIES

Harri Toivonen, younger brother of Henri, will be campaigning an MG Metro 6R4 in the British Open Championship this year. With support from Unipart, the UK accessory and replacement parts company, Harri will be navigated by Neil Wilson who co-drove Henri Toivonen to vic-

tory on the RAC last November. First outing for the young Finn in the R.E.D. prepared Metro was the recent National Breakdown Rally in the North of England which ended in retirement when the car hit a gatepost, holing the radiator.

MORE ACTION NOW, PLEASE

Without wanting to take any credit for ourselves, the title of the editorial in the last issue of GPI read, "Action now, please". The plea referred to spectator security on rallies. Three weeks later, Joaquim Santos left the road during the first stage of the Portuguese Rally, killing three and injuring a further thirty. When you see the photographs and films of the event, it is a miracle that there weren't more lives lost in the incident.

By refusing to continue the event, the professional drivers have taken the first steps in making sure that the problem is taken more seriously in the future, that organisers are aware of their responsibilities and that everyone involved in rallying cannot let this sad state of affairs continue.

In the statement which they issued following their decision to withdraw from the event, the drivers were eager to underline that the technical characteristics of today's rally cars must not be blamed and it is true that this sort of accident is not new. In the days of Timo Makinen and the Peugeot 504 V6, a young child was killed on the Ivory Coast. On the 1984 Monte Carlo, a spectator was killed when the Audi Quattro Gp. No of a French amateur went off. Nor is the problem restricted to Latin countries: Many readers will remember the TV film of a Vauxhall Chevette rolling out of control following a bad landing after a jump on the 1000 Lakes in Finland in 1984. No one was killed but near misses happen more often than we believe, and everywhere.

Apart from banning spectators from events or providing a policeman for every three spectators, there are two important means of saving lives and of protecting our sport: More effective public awareness of the dangers involved and, in Latin countries in any case, organising special stages away from areas of dense population. The drivers stated that today's cars cannot be blamed for the recent catastrophe. In a way, that is not true. Not for technical reasons but because they have become more exciting to watch, genuine F1 cars of the open. All the leading drivers confirm that there were more spectators than ever in Portugal and most other organisers claim that their numbers are up. The popular press and TV also follow the World Championship a lot more comprehensively now, with the effect of attracting increasing numbers of casual spectators. These are the people that any campaign should be aiming at, the non-enthusiast, although one wonders in the case of Portugal if even that would ever do any good. The professional drivers' action has had the benefit of bringing the debate out into the open but it is not only up to them to act. If we want to see the current healthy growth of rallying continue, then it is up to everybody involved to do their bit. Quickly. GPI.



LOW TAR As defined by H.M. Government

DANGER: Government Health WARNING:

CIGARETTES CAN SERIOUSLY DAMAGE YOUR HEALTH

HONG KONG - PEKING 1986

After a successful first running of the Asian event, the organisers are currently busy putting together the 1986 edition which will run from 14th-19th September. A total distance of 3,860 km is planned, of which 900 km will be competitive. Entry fee is fixed at US\$ 1,100 per member of the team (including service personnel), plus US\$ 2,300 per competing or service vehicle. This package provides for 9 nights accommodation in Hong Kong and China, food in China, all visas and permits,

tour of Peking, return air ticket from Peking to Hong Kong, vehicle and driver licences, 3rd party insurance, fuel, breakdown service and return rail transport from Peking to Hong Kong for vehicles. Unlike last year, race will be allowed in convoy and competitors (or their representatives) will leave Hong Kong on 13th July, provided a fully paid up entry has been received. Entries at the price quoted above close on 17th June but it will be possible to enter the event up

until 11th August at a higher fee. Further details may be obtained from: Hong Kong AA, PO Box 20045, Hennessy Road Post Office, Wanchai, Hong Kong. (Telephone 5-743394 or telex 62359 AAHK HX). Interested parties in Europe should get in touch with CSS Promotions Ltd., Tower House, Southampton Street, London WC2 7HA, England. (Telephone 01-379-7989 or telex 22432 CSS PRO G).



CITROEN RETHINK



The Citroen team opted not to make the journey to Portugal for the third round of the World Championship. Instead, the time was spent at their Trappes base, just outside Paris, where the main priorities were to lighten the BX 4TC and to find a bit more power. "Rather than waste a fortnight in Portugal," said Citroen Competitions, "our time will be more efficiently spent preparing for the future. Especially since from now on there is going to be a rally every two weeks. It's difficult to plan a proper development programme in such conditions." The French manufacturer should be in Corsica and the programme should be that initially planned after the French event.

GROUP S, END OF A DREAM

In our naivety, we were hoping that the new Group S regulations would have the effect of lowering the overall performance of tomorrow's rally cars. Alas, the solution of limiting horsepower to 300 bhp seems to have lost favour. One project was to limit engine capacity to 1 200 cc for turbo cars and 2 000 cc for non-turbos but it is feared that the Group S cars would be humiliated by today's Group B cars and even certain Group A. The argument is that keeping today's engine sizes would help curb the incredible rise in costs for the manufacturers and Peugeot claim that it would be more sensible to limit power by imposing conditions on intercoolers and by allowing only one form of supercharging (surprise, surprise!). Lancia, on the other hand, uphold the idea of reducing engine capacity. If the metamorphosis is going to cause as many problems as all that, why not, if we may humbly suggest, keep things as they are?

VIDEO from DUKE marketing

There has never been so much good coverage of all of the World's major motorsport events as there is from the 1985 season.

The Formula One year from Brazil to Australia, superb World Championship Races from Sweden to the Lombard RAC, the World Endurance Championship from Monza to Kuala Lumpur and many, many more. They've all been comprehensively filmed this year, to Broadcast standard and are available on video from Duke Marketing. As the World's leading distributor of all forms of powersport videos DM offer you not only individual events on video but compilation tapes of each major series, which tell the story of the season from start to finish. Full details on over 180 DM videos plus 50 selected titles from other distributors are in our new FREE 28-page catalogue. Here's just a sample to whet your appetite.



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The most action-packed 100 minutes in the Formula One Year is scheduled for release by FOCA on 5th December. New for '85 are commentaries on EACH RACE by the drivers who were at the front, so you hear the inside stories of every stage of the season from Alain Prost, Ayrton Senna, Stefan Johansson, Michele Alboreto, Keke Rosberg, Nelson Piquet, Niki Lauda and Nigel Mansell. A fascinating and highly amusing addition to the ultimate souvenir of the season. The overall story is narrated by Simon Taylor.

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The Grand Prix Cars 1924 to 1939. The BBC have never had so many requests for a video version of a motorsport programme as they have for this documentary. Fascinating stuff throughout. 79 mins BBC/MGM £24.95

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Graffiti



It will make some of you feel rather ancient to learn that Jim Clark, if he had lived, would have been 50 years old on March 13. He only competed in 72 Grands Prix (Nigel Mansell has done 74), but he won 25 of them, started from pole position in 33 and set fastest lap in 27. He was world champion in 1963 and 1965 and would surely have been champion again in 1968 if he hadn't been killed in a mysterious accident at Hockenheim during an F2 race in April that year.

Anybody who saw Jimmy racing will agree that the mention of his name is an excellent excuse for a bit of nostalgic reminiscence. I fondly remember him at Aintree, driving rings round everyone in a Lotus 30 sports car with a chassis that had all the rigidity of a feather mattress. Later I was to meet him briefly when he and Jack Brabham turned up at the party which my local club (Mid-Cheshire) had organised in the paddock canteen at Oulton Park on the night before the Gold Cup F2 race.

The following afternoon, while scrapping for the lead with a group that included Alan « Smiler » Rees (now team manager at Arrows), Jim spun at Cascades, the corner where I was marshalling. The man from Motoring News snapped the incident and they published the picture in the following Thursday's edition. You can just see a very youthful Graffiti vigorously waving his yellow flag.

Perhaps the most spectacular memory of Jimmy, however, is the way in which he drove a Lotus-Cortina in saloon car races. The Lotus-Cortina was a homologation special fitted with a twin-cam engine that produced slightly less power than a modern FF2000, but on its skinny Green Spot Dunlops it was a handful for most of the aces of the era. With Jimmy at the wheel, however, you knew how much faster he was than the other guys because he had the inside front wheel literally a foot higher off the track than they did.

On the day that Jimmy was killed, most of his British admirers were at Brands Hatch for a sports car race. Someone

must have heard a report of his death from the radio, because the news sped across the circuit like a horrid infection. While I've seen a lot of crocodile tears for dead drivers who didn't have a tenth of Clark's talent, there can't have been a fan at Brands who didn't feel the loss personally. I'm sure I'm not the only one who'll be raising a glass to his memory this month.

Strangely, I was put in mind of Jim Clark this month by the new flat-as-a-kipper Brabham BT55. Exciting though the concept is of getting the driver to lie right back, Colin Chapman first thought it up for the revolutionary monocoque Lotus 25 in which Jimmy brained the opposition in the 1962 Belgian GP at Spa, its debut appearance.

Frustrated by not being in Rio, Graffiti kept in touch with the proceedings in Brazil by perusing the two continental sports papers which were covering the tests. Considering that his appreciation of Frenchmen matches Reagan's relationship with Gadaffi in cordiality, it was fascinating to read Patrick Head quoted in the Paris daily L'Equipe. Pat said that he couldn't wait until Monaco or Detroit to observe the sort of visibility and aiming problems that Rick and Elio are going to run into.

Visibility seems to be the last problem that Brabham needed to worry about in Rio, though. Judging by the number of gearbox failures, the new Weismann seven-speeder obviously didn't appreciate the Carioca heat, in spite of its Californian origins. And by the end of the week the immaculate bodywork had been hacked around so much in order to improve cooling that the team didn't dare take the cars back to Cheshington. Instead, they stayed on in Rio for more tests. Knowing how intensely Brabham designer Gordon Murray dislikes Brazil, that must have been a real hardship for him.

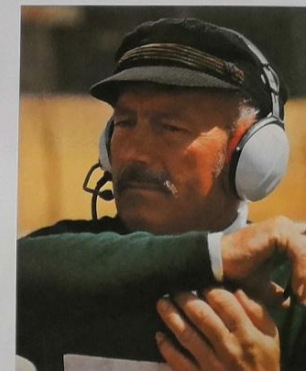
Paradoxically, although the concept of the kipper-car is obviously Murray's, its execution may be someone else's. While GM's designs have always shown sym-

metry for the task of the mechanics who have to work on them, the BT55 is a spannerman's nightmare. At least, that's what Milan's Gazzetta dello Sport (75p from your friendly Mafia newsagent, and only 24 hours late) suggested when translated by my dodgy Italian.

By the time these words see print you will already know who's won the Brazilian GP. With Brabham mired in new car problems and Ferrari still trying to sort out the handling of last year's chassis, the season looks like being a nice three-way scrap between the compact new Williams-Honda, a subtly revised McLaren-TAG and Senna's Lotus, complete with an amazing experimental Renault engine in which the valves are operated by compressed nitrogen gas.

French racing car designers of recent years haven't had much of a reputation for deeply innovative engineering, but that wasn't always so. In 1912, for example, three factory drivers representing Peugeot showed up at Dieppe for the Grand Prix de l'Automobile Club de France. All three had new cars powered by a remarkable four cylinder engine designed by the Swiss, Ernest Henry. By the standards of the time the engine was small: at "only" 7.6 litres it was half the capacity of the rival aeroplane-engined Fiats. It also ran at a high crankshaft speed (2 000 rpm) and produced commendable power (about 130 bhp). Peugeot ace Georges Baillot duly ran away with the two day 1 540 km event, and from that day to this there hasn't been a serious racing engine which didn't incorporate Henry's innovation of overhead camshafts and four valves per cylinder.

There is a vivid report of that race 74 years ago in TASO Mathieson's "Grand Prix Racing 1906-1914", which has been sent to me by my colleague Eoin Young. This marvelous book, 300 pages illustrated with superb photographs by Mathieson himself, was first published in 1965, but for various reasons never fully distributed. Eoin has chanced upon the remaining stock and he is offering



by Mike Doodson

copies, complete with the original slipcase, at £60 inc. p&p.

Any fan who has a chance to leaf through the text and photographs of the book will find himself in a time warp that recalls an era of the sport which had much in common with modern times, in spite of those huge cars and the dusty roads on which they raced. It seems, for example, that the French have always been spoilsports. Rather than get beaten again in 1909 after a particularly bad defeat at the hands of Mercedes in 1908, the French manufacturers got together to boycott racing altogether in Europe. Indeed, there wasn't any top-level racing again until the Peugeot's Dieppe GP victory in 1912.

Britain's top racing historian, Cyril Posthumus, rates the Mathieson book as one of the "most desirable and sought after motor racing classics." Copies may still be available from Motormedia Ltd, PO Box 3, East Horsley, Surrey KT4 5RL.

FISA's energetic pressman Gilles Gaignault (or "Jules Juggernaut", as some Brits have taken to calling him) has just distributed the official F1 regulations for 1986. There is some interesting reading once you've battled through the definition of fuel ROM ratings and the details of where you can put your wing's if you've been so bold as to design your F1 car with front wheel drive.

There is a whole section of what FISA describes as "Podium Procedure." Did you know, for example, that laurel wreaths are strictly forbidden these days? It doesn't seem so long ago that winners were expected to don a sort of decorative hedge, but such things were banned when sponsors complained that their names on drivers' uniforms were being obscured from the sight of those millions of televisioners.

There is a touching piece of advice to race organisers about trophies, revealing that FISA has a human face after all. "There have been many cases," say the rules, "in which glass trophies have been broken on the podium, (or) where elderly persons have had trouble lifting

trophies which were too heavy, etc. Choose objects which are pleasing to the eye and light enough to be handled on the podium."

It is also the duty of the organiser to provide bottled water and champagne. "It must be ensured," insists FISA, "...that the champagne is ready to be used in accordance with the procedure." It does not specifically say that this procedure prohibits drenching unpopular FISA Presidents, but I understand that this is covered in another section of the rules devoted to Maintaining the Dignity of Men in Blue Jackets.

By far the most exciting news item of the 1986 F1 season to emerge before the Brazilian GP was the unveiling of the Cosworth-Ford V6 turbo engine. If this engine works as reliably and fuel-efficiently as Ford's top brass anticipate, we can expect to see it being used by several teams in addition to Lola-Force, who have an "exclusive" on it, at least in theory, for the next three years.

For reasons best known to Ford, this important announcement was made at the Geneva Motor Show, where the majority of the hacks are road test wizards intent on scooping their rivals with the 0-60 acceleration times of the latest Subaru. Of the rest, those who aren't on the lookout for a free lunch still believe that the best racing engines are made by Coventry-Climax.

Rather foolishly, Ford put out a press statement claiming that the engine, a miraculously compact 120 degree V6, is fitted with an electronic management system identical to that on the latest Granada. Agreed, the V6 fitted to the Granada is a fairly sophisticated bit of kit, but unlike its racing cousin it doesn't rev anywhere near 12,000 rpm and it doesn't have to turn out 800 reliable horsepower for an hour and a half under racing conditions on a ration of 195 litres.

As most people know by now, it was the perfecting of the electronics which delayed the first tests of the engine, which was originally due to run in the USA during

the first week of November 1985 and ended up doing its first furtive laps in the snow round Boreham on February 21, when it did 25 laps of the ancient (and far from safe) perimeter airfield circuit. In spite of pleading from Jones, whose faith in the substitute Hart four-banger is less than limitless, it wasn't due to race in this month's Brazilian GP.

In Detroit last June, Ford's Walter Hayes announced that Ford intended to go several steps further than any other F1 engine manufacturer by taking responsibility for watching fuel consumption away from the driver. "What we are aiming to do is put the thinking into the engine, where it belongs," he said, "and free the driver so he can concentrate in a more single-minded fashion on his driving." Since the engineers at Ford Aerospace who were given this brief also happen to have put more satellites into accurate orbit than anyone else, it was reasonable to expect that they had the ability to make the engine function in accordance with Mr Hayes's brief.

Inevitably, however, much was expected of the new engine at this early stage of its development. It had been born in the long shadow of its predecessor the DFV, which won the first of its 155 successes on its debut appearance in 1967 (Jim Clark, incidentally, at Zandvoort) and made its final F1 appearance (in Martin Brundle's Tyrrell) at the Osterreichring last August. Most unfortunately, as a result of the delays, the Ford people went on to the defensive, which has led to wild rumours (all unconfirmed) of major blow-ups in testing and concomitant strife between engine designer Keith Duckworth and the Aerospace people in the US.

Meanwhile, it is a great pity that a company with so many admirers for its past achievements in F1 seems unaware of the huge fund of goodwill which it has earned since 1967. If Ford had been frank about its problems, racing folk would have been much more sympathetic.

JONATHAN PALMER

DOCTOR PALMER'S PRESCRIPTION: GO FASTER!



ALTHOUGH JONATHAN PALMER ALREADY HAS IMPORTANT F3 AND F2 CHAMPIONSHIP SUCCESSES BEHIND HIM, IN FORMULA 1 HE HAS YET TO SCORE A POINT. AS ONE OF THE VERY FASTEST SPORTSCAR DRIVERS, HOWEVER, HE DEMONSTRATED RACE-WINNING SPEED LAST YEAR IN THE CANON-PORSCHE 956 — UNTIL A MAJOR ACCIDENT AT SPA PUT HIM OUT OF ACTION. FULLY RECOVERED, HE'S NOW BACK ON HIS FEET AND READY TO SHOW HIS UNDOUBTED F1 POTENTIAL IN A FULL SEASON OF GRAND PRIX RACING WITH THE GERMAN ZAKSPEED F1 TEAM.

by Mike Doodson

The farmhouse, all beams and two hundred year old brick, lies at the end of a long lane, dappled with sunlight from a clear late February sky. Parked in the drive is the Mercedes, a 2.3 "Cosworth" 190, and hidden round the back, in a field the size of a soccer pitch, is his little Enstrom helicopter. Even though it's mid-winter, the manicured lawns and carefully pruned bushes suggest that summertime will reveal a garden of glorious Englishness looking over the green fields of Hampshire.

Within the hour he'll be heading for Heathrow airport *en route* to Portugal and an exclusive F1 test with Zakspeed at Estoril. He offers a warm handshake at the door, and as we walk inside there's not a hint of a limp in the right leg which he injured when his Canon Porsche crashed during qualifying at Spa last September. Dr Jonathan Palmer is his usual fit, ruddy-cheeked picture of health, itching to get down to racing again.

The Estoril test is important both to him





P R O F I L E

and the Zakspeed team. Not only is there a virtually all-new chassis to be sorted out, but Bosch has provided an electronic engine management system on which the men from Niederrissen will be relying to make their car's performance more competitive in 1986. After one Grand Prix with Williams as a "guest" driver in 1983 and two full seasons in F1, Jonathan wants to see some tangible results this year. "A realistic forecast would be to score some world championship points. I sincerely believe we can do that. I want us to qualify regularly in the top twenty. And to be running in most races in eighth, ninth or tenth position by 80 per cent distance. With a bit of luck, that can translate into a point-scoring result at full race distance in a few GPs. But having told you a "realistic" target, I want to be doing substantially better than that..."

"FORMULA 3 PROVIDES A MUCH FAIRER COMPARISON OF DRIVERS THAN F2 DID"

He will be staying away from sports car racing this year, not because of the dangers but because Zakspeed will be competing in all 16 of the world championship races. "As the team's only driver it's important for me to accept the responsibility which Zakspeed have entrusted to me. And Formula 1 is so difficult that we can't afford to dilute the effort that either the team or I put into it."

There is no mistaking the dedication in his attitude both to his team and himself. Some people have accused him of being boringly earnest, keen to discuss any subject provided it's J. Palmer, even of being as pushy when he's off the track as you'd expect a driver to be when he's actually racing. I would not agree, although he has a disconcerting ability to hear two conversations at once and a habit of breaking off the one with you when he thinks the other one is getting more interesting to him.

He has clearly made a success of his 29 years. The boyish face belies an aggressive and accomplished racing driver, not to mention a man who generates sponsorship for himself from hard-headed businessmen. He runs an uncluttered office at home, employing a secretary who speaks fluent German and is already helping him to capitalise on the commercial possibilities that have opened up for him in Germany thanks to being a Zakspeed driver.

He shares the house with his girlfriend Gill Woodruff. They met when he was still practising medicine: she is a qualified nurse who likes to travel with him when she can arrange leave from her nursing job.

It's five years since Jonathan was a 24 year old houseman in a London hospital who managed to qualify as an MD in the same year that he won the British Formula 3 championship. Unlike two other F3 exponents, Senna and Brundle, who were to follow him into F1, Jonathan spent two years in Formula 2 with the factory Ralt-Honda team, winning the European championship in 1983. But although the direct jump into F1 from F3 doesn't seem to have handicapped either of those two, Jonathan feels that F2 gave him something that F3 never could have provided.

"As a career move I think F2 was much more valuable than popular opinion would have it. I didn't get into Formula 1 from what I did in F3 in 81, I did it through F2 and winning the European championship in 83. Of course, on the face of it F3 provides a much fairer comparison of drivers than F2 did, because in F3 you've got "control" tyres, and engines which are virtually equal. In F3 a good driver and a good team can come in and get the job done, even if they're new and fresh, whereas that's impossible in F2."

"In the two years that I was with the Ralt-Honda F2 team there were a lot more variables to consider. F2 was still allowed to use ground effects, for example, and the scope of the racing was wide, whether it was a matter of choosing what length of intake trumpets to use, or deciding what height to run the skirts, or selecting qualifying tyres. As far as I was concerned, the rather limited technical horizons of British F3 were dramatically expanded by going into F2. As a driver I learned a lot in those two seasons, and I really enjoyed being with Ralt. Ron (Tauranac) may be a strong character, but he's also rewarding to work with. If you want to argue with an experienced manager like Ron, you have to double-check your thoughts first. And whenever I challenged him, I usually found that I had learned a lot more from the experience than I would have done by just saying Yes and No."

"IF YOU WANT TO ARGUE WITH AN EXPERIENCED MANAGER LIKE RON TAURANAC, YOU HAVE TO DOUBLE-CHECK YOUR THOUGHTS FIRST"

"Ron loves a challenge, you know, and having lost the championship in '82, he put a lot of effort into getting it back. He has such an imaginative, creative mind. I'll always be grateful to him for teaching me so much."

Jonathan feels much the same way about John Macdonald, boss of the F1 RAM team which he joined in 1984. "I

P R O F I L E

was very lucky to have John working for me that winter. He was only planning to run one car, and my heart sank when he signed up Philippe Alliot, who of course had the money. But then he came back and said he would try to run a second car for me. He was terrifically encouraging: I have to say that he actually pointed me in the direction of a considerable amount of the sponsorship money that I found for the team last year. He's a real grafter, someone who works hard and is prepared to put a lot of effort into someone who's also prepared to work hard. That was a great inspiration, especially when it all came together, even though I had to borrow quite a lot more money, to top up the budget."

"ZAKSPEED'S WHOLE APPROACH WAS OBVIOUSLY NOT THAT OF PEOPLE WHO WANTED A YEAR IN RACING AS A CHEAP PUBLICITY STUNT"

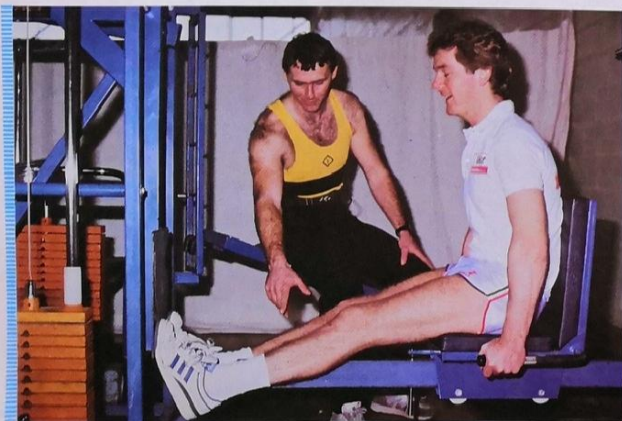
Sadly, in spite of the affection in which he's held by so many racing personalities, it's obvious that there is something that Macdonald is not doing right. Jonathan agrees, but can't put his finger on any of his former boss's faults. "In F1 it's difficult just to get out of the rut. I know that in 1984 RAM had better results, four ninth places, than the same team did in 1985. Using the bog-standard specification Hart engine, in my year there was really only sufficient for Formula 3000. On the basis of that year, I would say that John's commitment and motivation to racing were excellent. We all knew that we needed more help on the design side and that the car wasn't

good, but that was all due to the budget constraints."

As a driver, I wondered, did he ever have any concern about safety? "No... But the RAM was quite a strong car, actually, and well prepared. The only time we had a problem was when something went wrong with steering arms, which is what caused my big shunt at Brands. Alliot had a breakage in the warm-up before the race at Zandvoort, but he managed to avoid crashing. Basically it was because the parts had done a lot of miles, they were probably a season old. John got us together and said it was our choice whether we raced or not. He explained what had been done to fix the problem and said he thought it would be OK, but he left the final decision to us. And of course we raced... and at Zandvoort I came eleventh."

The move to Zakspeed came with an invitation out of the blue. "Of course, I'd read in the comics that they were building a car, but like everyone else I didn't take it very seriously. And I assumed that when the car came out some German hero would be plugged into it to make it a real nationalistic effort. Then one morning I had a call from Andrew Marriott (of the CSS promotions agency in London) to say that he'd got Erich Zakowski and Siegfried Vogel from Zakspeed with him, and they didn't have a driver for their F1 project. He told me they were a really serious group and not to dismiss the idea. As soon as I'd put the phone down I jumped in the car and went to have lunch with them... and was very inspired and impressed. Once we'd done some testing, it just rolled on from there."

"I think that Manfred (Winkelhock), who'd been with Zakspeed before, in saloons, and had already tried the F1 car, felt that it wasn't the right career move for him to make at the time. He probably suggested me as being a good person to do the job they wanted out of a driver that year. I don't want to belittle myself too much, but they weren't





P R O F I L E

in a strong position to get a big-name driver. And I think that my interest in the test and development side, as opposed to just jumping into the car occasionally, was something that they thought was of value.

"QUALIFYING IN MONACO '85 WILL ALWAYS REMAIN ONE OF MY OWN PERSONAL GREAT ACHIEVEMENTS"

"It was also a situation which suited me well, because to be honest I was worried that I wouldn't get anything. I'd been testing with Toleman, and that was looking good, but I was concerned that in the end political or commercial considerations would prevail in the choice of their drivers. And if that happened, no one except probably me would shed too many tears if I got left out in the cold. After having to bring a lot of money to race F1 in 1984, now with Zakspeed I was being offered a small amount to race in 1985. I could also see a lot of future in them: they'd even built their own engine, and their whole approach was obviously not that of people who wanted a year in racing as a cheap publicity stunt. So I was very interested to get involved."

Having missed two of the ten races he planned to do with Zakspeed (due to his sports car accident), Jonathan recalls the Monaco GP, where he finished 11th, with particular pleasure. "Not so much the race itself, which said more about the Zakspeed than about me as a driver. We'd not really started a race before then, because of various problems. I'd been shunted on the grid at Estoril and we'd had a incurable misfire which prevented me from starting at Imola... so Monaco was critical."

"The highlight of Monaco was qualifying, and for me it will always remain one of my own personal great achievements. I started in total disarray by crashing on the first day and, I thought, eliminating ourselves, because we had no spare car. In fact, they got it fixed."

"But although I'd been there for qualifying the previous year, the team had never been to Monaco of course. The thing was desperately difficult to get round the slow hairpins because of the lack of electronic fuel injection: the power wasn't bad, but the pick-up was pretty hesitant. And I found immediately that I had to flick the back end around under power because we didn't have enough lock to get around the hairpin. We just had to stop after I'd done two laps, to modify the steering rack."

"Then when I crashed in the first qualifying session, I felt that I had let the team down badly. I can tell you now that I was worried sick about the weather being bad for second qualifying on the Saturday. So, to have got on the grid in 19th place was really satisfying. And I would

have still got on to the grid with my second fastest lap."

"I love driving Monaco. It's a pure adrenaline circuit, a place where although you have to be precise you can't be calculating. It's what I call 'arty' driving: something that comes from the heart rather than the head. You just go... and it happens."

A persistent problem with the ingenious Zakspeed engine throughout 1985 was valve gear. As Jonathan explains, it took time to fix. "Vibrations were making the cam gears break up. It may seem stupid to have had the same problem recurring, but it's not easy to change major design features of an engine in the course of a year's racing. It took several months to modify the gears. Unfortunately for me, it was just coming right, and we'd got some new systems in, in time for Zandvoort, which was just before I had the accident in the Canon Porsche."

"LIKE ANY GOOD DRIVER, I BELIEVE I HAVE A GREAT DEAL OF NATURAL TALENT"

Although the Spa injuries put him out of racing for the remainder of the season, at least Jonathan escaped with his life. In view of the fatal accidents of Winkelhock and Bellof, I wondered, had it been worth risking so much in return for the cash to be earned in sports cars?

"It certainly wasn't an earnings move, that's for sure! I suppose I did Group C partly as a career move, and partly for the fun of driving. At a time when I was not able to win anything in Formula 1, I wanted to compete in an area where my ability could be judged. In that way I think Group C has been very successful. The important thing was that it gave me an opportunity to be seen right at the front in a competitive car, dicing with the Patreses and others like him. Instead of looking at 20th or 25th place on the time sheets in F1, it's great to be looking for something at the top, and knowing you're going to be pissed off if you're sixth. Technically, it was also interesting: after our '84 experiences we modified our car and spent the winter setting it up, which itself is an interesting and satisfying experience."

"Like Monaco, the Silverstone 1 000 km was a good memory for me in '85. Dicing with Patrese in the first hour there was exhilarating, it's the only word for it: I got a thrill from driving in and out of all the traffic, getting the timing right and still managing to do it all within the fuel allowance."

Obviously, he had reflected carefully on the question of the accidents. Less obvious were the practical precautions which he had taken after the Winkelhock tragedy in Canada. "After any accident I want to try to study the causes and learn something from it if there is something to be learned. Although we may never know exactly what happened, it



seems that Winkelhock died because his head struck the roll bar over the screen. I'd seen that, of course, and it's ironic that at Spa, where I had my own accident, when I went out to practise I had a new steering wheel spacer that I'd asked our manager Keith Greene to get for me so that I could be sitting further away from the roll bar.

"You have to know what you're doing in racing, though. Either you're going to race flat out or not, because there's no case for driving at nine-tenths instead of ten-tenths. Either you give racing your total commitment or you give up. At Spa there was no question of me giving it anything other than my total commitment, in fact I was going really well before the accident. After the accident, I wasn't in any position to decide whether I was going to be able to race sports cars again, because it was obvious that I wouldn't be fit to do any more Group C races that year. So I was never put on the spot about deciding whether I wanted to do it again or not."

"FLYING A HELICOPTER IS ONE OF THE MOST CHALLENGING COORDINATION EXERCISES POSSIBLE"

When I asked him to define his own qualities as a driver, he suddenly sounded awkward and shy. Palmer stuck for words is a rare sight indeed! "Aah..." he reflected. "I suppose a combination of things. Like any good driver, I believe I have a great deal of natural talent. I can get into any car on any day and drive it very quickly. Furthermore, I'm generally a dissatisfied driver, and although I don't think much about its behaviour when I'm driving, once I'm

out of the car I can do a sort of action replay in my mind of everything. I start to ask myself why we aren't quicker, how we can improve, and what the limiting factors are. I enjoy the challenge of trying to isolate the areas where we can gain time."

We moved on to the subject of aviation, an area in which he is much less prone to embarrassment. In spite of its noisy piston engine and comparative lack of speed, the mechanical love of his life is the little Enstrom, a gravity-defying machine which he uses maybe three times a week. It may not be the cheapest way of getting to Sainsbury's, but it's certainly more fun even than a Mercedes 2.3.

"Flying a helicopter also happens to be one of the most challenging coordination exercises possible, something that you can never do perfectly," he adds. "Hovering is very difficult, especially in a strong wind or getting into confined spaces. Of course I warn the neighbours first... It also happens to be a very good way of preserving my driving licence, I don't have to worry about speeding in the air."

A glance at my watch, and I note that we've been chatting for almost an hour, which is exactly the period of time which he had promised me. The few muffled sounds from the phone have been brief as Sarah answers efficiently in the office, and he pops his head around her door to check that there's been nothing urgent. His own office is a few cramped inches behind the steering wheel of the new Zakspeed Formula 1 car, already waiting for him in one of the garages at Estoril. Understandably, he wants to be off to the airport.

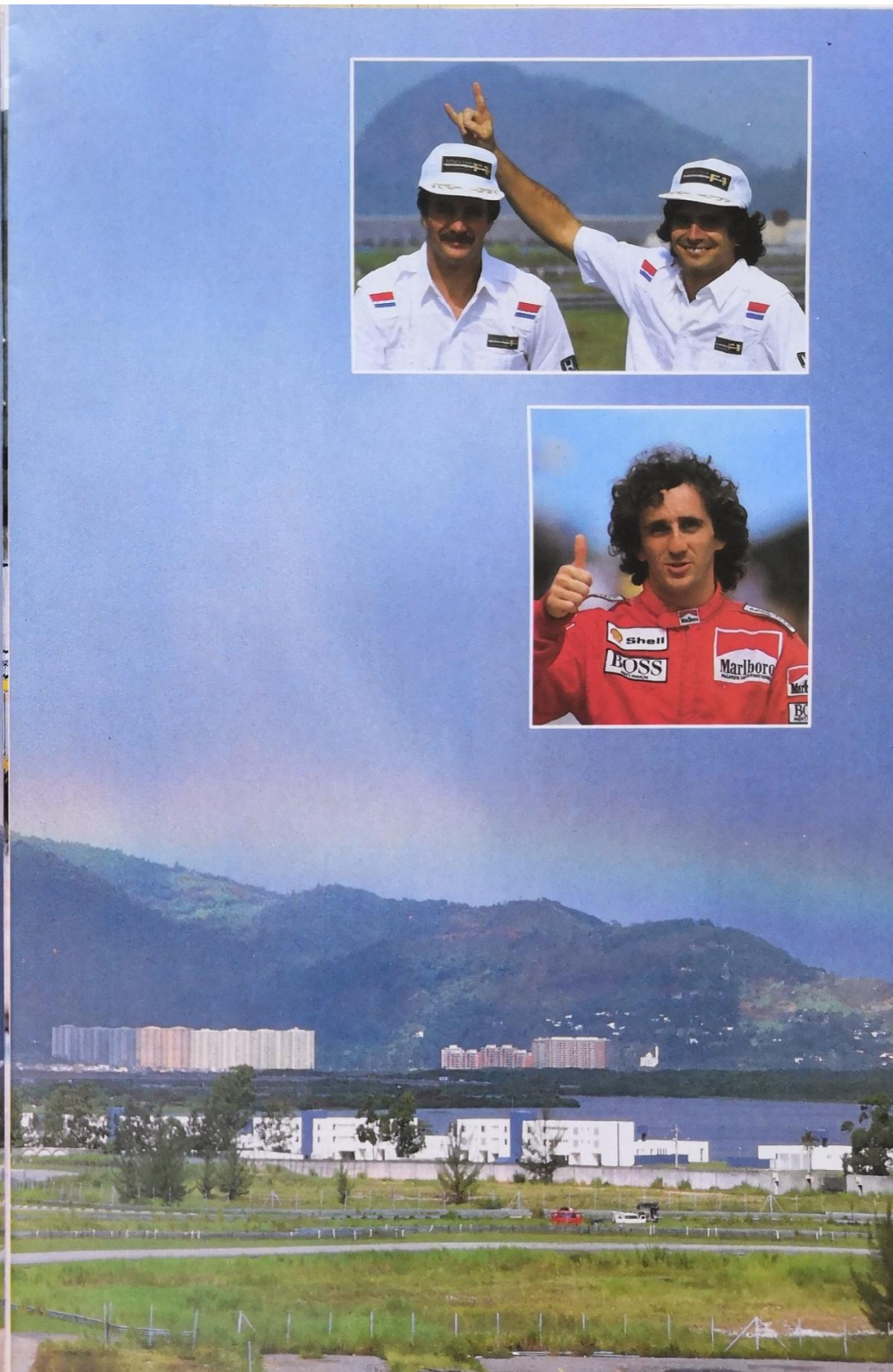
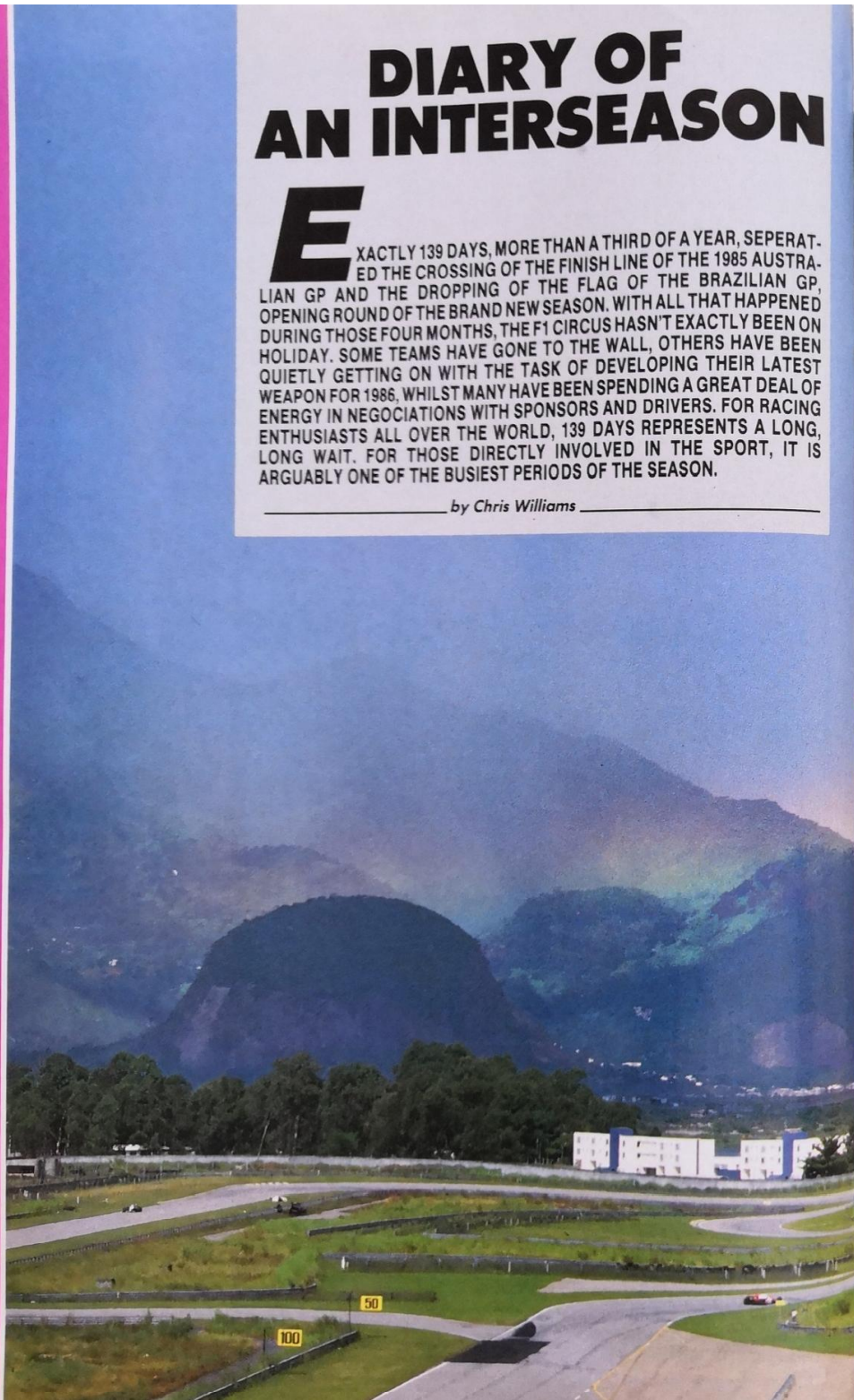
His mind is beginning to concentrate on his job and it's an appropriate moment to say goodbye. Perhaps it would have been better to wish him good luck, but I don't. And on the way back down the lane, it seems right. For Jonathan Palmer is a man who is clearly in control of his destiny. And like the doctor that he is, he knows what's best for himself. His future could not be in better hands. ■

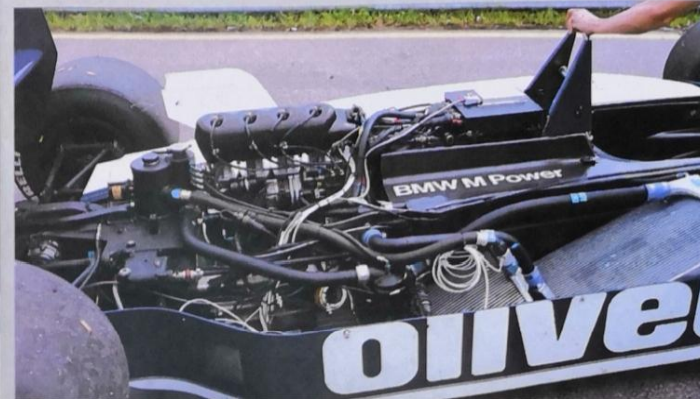
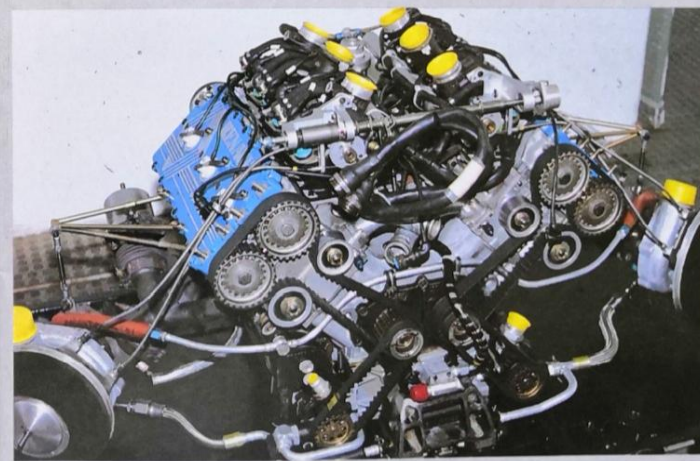
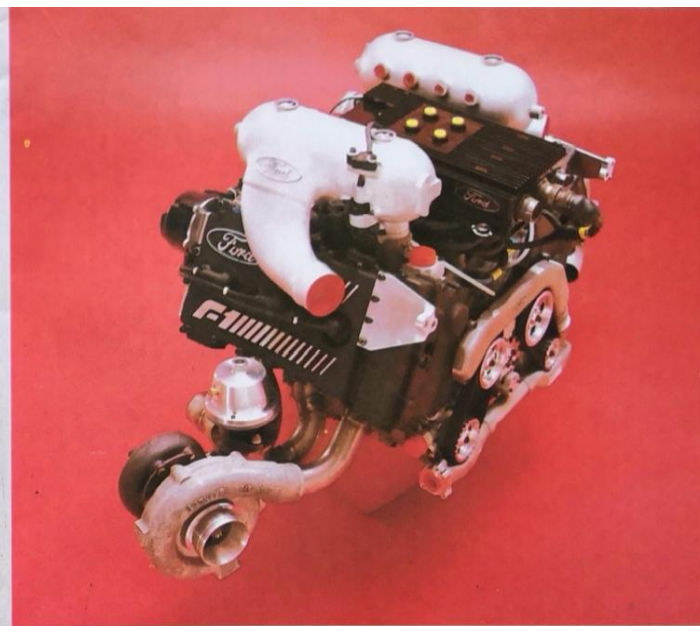


DIARY OF AN INTERSEASON

EXACTLY 139 DAYS, MORE THAN A THIRD OF A YEAR, SEPERATED THE CROSSING OF THE FINISH LINE OF THE 1985 AUSTRALIAN GP AND THE DROPPING OF THE FLAG OF THE BRAZILIAN GP, OPENING ROUND OF THE BRAND NEW SEASON. WITH ALL THAT HAPPENED DURING THOSE FOUR MONTHS, THE F1 CIRCUS HASN'T EXACTLY BEEN ON HOLIDAY. SOME TEAMS HAVE GONE TO THE WALL, OTHERS HAVE BEEN QUIETLY GETTING ON WITH THE TASK OF DEVELOPING THEIR LATEST WEAPON FOR 1986, WHILST MANY HAVE BEEN SPENDING A GREAT DEAL OF ENERGY IN NEGOCIATIONS WITH SPONSORS AND DRIVERS. FOR RACING ENTHUSIASTS ALL OVER THE WORLD, 139 DAYS REPRESENTS A LONG, LONG WAIT. FOR THOSE DIRECTLY INVOLVED IN THE SPORT, IT IS ARGUABLY ONE OF THE BUSIEST PERIODS OF THE SEASON.

by Chris Williams





The interseason break is traditionally a time when the F1 world is progressively rebuilt. Engineers and technicians are hard at work getting the last drop of performance from their latest inventions and team-managers are running round signing contracts with new or existing sponsors, filling gaps left by drivers who have gone elsewhere or consolidating the infrastructure of their teams. Even before the chequered flag fell in Adelaide, 3rd November of last year, certain driver transfers were public knowledge, others were in the pipeline, yet some moves remained a puzzle until the last moment. Some of the major technical developments were also only unveiled just before the annual Rio test sessions. In typical style, Gordon Murray for example kept his latest creation a jealously guard-

First photo of the latest Ford F1 engine (above). Tambay put in a few laps in the Lola fitted with the new V6 at 120° on Ford's private circuit at Boreham and elsewhere but it is unlikely that we will see the engine raced until the Belgian GP earliest.

The brand new Renault turbo (middle) features pneumatically controlled valves which leave valve-springs redundant. Main benefits of the principal are a higher revving engine and greater reliability.

Gordon Murray has been able to achieve the extremely low centre of gravity on the BT55 partly thanks to the mounting of the BMW engine at 74° from the vertical (below) and the near horizontal driving position that Patrese (far left) found some difficulty getting used to.



ed secret until the end of January. The Brabham BT 55, the result of Murray's unquenchable thirst for technical innovation, is undoubtedly the most interesting new development. With its extraordinarily low centre of gravity (the BT 55 is 23 cm lower than its predecessor, the BT 54) and the 4-cylinder BMW engine inclined 74° to the left (ie practically horizontal), the last creation from the British based team has naturally aroused a great deal of interest.

The few figures released by Brabham speak for themselves: a total of 117,000 hours work have gone into the BT 55, whilst the cost of the car that Riccardo Patrese and Elio de Angelis will be driving this year is said to be in the region of 10 m dollars. That works out as very expensive per horse-power, even if power is given as 1 050 bhp for qualifying and 900 bhp for the race!

Fourteen teams will be fighting it out this coming season, fourteen teams supplied by just two tyre manufacturers (Goodyear and Pirelli) and nine engine-builders (TAG-Porsche, Renault, Honda,

Guy Ligier eventually preferred experience to youth by choosing René Arnoux as replacement for de Cesaris. As a result, the French driver will be working alongside Larrousse and Tetu for the first time since their relationship at Renault came to an awkward end in 1982. Here the new Ligier line-up poses alongside Renault technicians at Paul Ricard (above).

Another new squad proud to get together for a team-pic was Williams Honda (below). Newcomer Nelson Piquet has no regrets about his decision to leave Brabham and is confident that the FW11 will impress this year. Mansell put in some very fast times in Rio both in January and February.



BMW, Hart, Zakspeed, Motori Moderni, Ford and Ferrari).

The transfer deals were, in some cases, long, drawn out affairs but, by mid-February, everyone (or nearly) was fixed. It also took a fair while to sort out certain sponsorship packages, notably for Ligier, Tyrrell, Lotus, Ram and Osella.

COUNTDOWN

Those who could get in a bit of rest were back at work by 12th January, opening date for the traditional Rio testing. GPI has selected the major topics concerning the testing in Brazil on a day to day basis, as well as other F1 news.

JANUARY 12TH

In the heat of the Brazilian summer, the first day of testing at the Jacarepagua circuit saw McLaren, Lotus, Williams and Ferrari shake off the cobwebs. Senna, with last year's Renault motor, put in fastest time of the day at 1m39.5s on the new track surface that the Rio organisers have laid in accordance with FOCA's standards.

JANUARY 13TH

Alain Prost tried out a new ignition system on his McLaren but the results were not very satisfactory. Once again, Senna was fastest of the day with the Lotus. With a time of 1m 34.52s, he preceded Nigel Mansell (1m 34.64s), Prost (1m 35.02s), Johansson (1m 36.45s) and Piquet (1m 38.09s) who was getting acquainted with the Williams-Honda.

JANUARY 14TH

Whilst in Europe rumours were circulating that French driver, Philippe Streiff could be Senna's partner at Lotus for '86, Prost was out on the

Alboreto (picture) and Johansson set second and third fastest times in Rio with the Ferrari which has changed little since last season.



circuit at Rio. Early in the morning (28° in the shade), the World Champion put in a 1m 33.46s despite a slight flirt with the grass border, with qualifying tyres. Senna improved on his time of the day before with a 1m 34.05s before Johansson, in the coolness of the evening and with qualifying tyres, achieved an interesting 1m 30.62s.

JANUARY 16TH

The Honda Williams team had every reason to be satisfied with their day's work. Mansell put in 62 laps (race distance) at high speed and used only 190 litres of fuel whereas Piquet was fastest of the day on 1m 34.34s. All doubt surrounding the choice of a partner for Lafitte was removed with the expected announcement that René Arnoux would be driving for the Ligier team.

JANUARY 17TH

Keke Rosberg escaped unhurt after a fairly hefty shunt in Rio which caused considerable damage to the McLaren's bodywork and suspension.

JANUARY 18TH

An oil leak stopped Alain Prost from putting in a few laps on qualifying tyres whereas Ayrton Senna, also on qualies, managed to beat

Intercooler problems on the Toleman TG186 (sorry, Benetton B86) meant that Teo Fabi (above) did not get in many laps in Brazil. The Italian driver and his new colleague, Gerhard Berger, are both optimistic for the coming year.

Arrows did not enjoy a particularly fruitful week in Rio. Boutsen returned home following the tragic death of his father whilst Surer (below), brought in as replacement, went to bed after just 7 laps with the flu. Christian Danner was eventually asked to stand in so that the expensive trip to South America would not be wasted.



1985's pole position time by 0.56s with 1m 27.16s. The Lotus used was the 97 fitted with the suspension and gearbox of the 98. In temperatures sometimes in the region of 40°, Piquet could only manage exactly 1 second slower than his fellow countryman.

JANUARY 19TH

McLaren, Lotus, Ferrari and Williams left Jacarepagua. Fastest times for each driver over the week were: on qualifying tyres Senna: 1m 27.16s. Piquet: 1m 28.16s. Mansell: 1m 28.22s. Johansson: 1m 30.62s. Alboreto: 1m 31.53s. Prost managed 1m 33.46s (on race tyres) and Rosberg achieved 1m 35.29s.

JANUARY 20TH

Official presentation of the Brabham BT 55 which features a lower, slender look. A more horizontal driving position and a motor at only 16° from the horizontal contribute to a much lower centre of gravity, the principal objective of Gordon Murray.

JANUARY 21ST

Alain Prost received the "Legion d'Honneur" from President Mitterrand in recognition of his World Championship title. Jacques Lafitte and Peugeot boss, Jean Todt, were also rewarded with the coveted award. BMW announce a contract with Niki Lauda as team adviser, the role of talent scout being part of his functions.

JANUARY 23RD

Under continued threats from Ayrton Senna to leave Lotus if Peter Warr chose Derek Warwick as "second" driver, the British team officially announced that the former Renault driver would

Zakspeed took the 861 to Estoril. The most apparent changes over last year are the revised body lines, oblique side-mounted radiators and increased power.



definitely not drive for them in 1986. The management of the Zandvoort circuit emitted warning cries that the circuit could well die following the exclusion of the Dutch GP from the 1986 calendar. Despite being determined to meet FOCA and FISA standards for the circuit, a spokesman said that anti-noise laws in Holland could prove to be an insurmountable problem.

JANUARY 27TH

The traditional skiing week reserved for Formula 1 drivers kicked off at Sestriere in the Italian Alps. The most adept at this winter pastime are Prost, Patrese, Lafitte and de Cesaris.

JANUARY 29TH

Lotus announced their choice of Scotsman, Johnny Dumfries, to drive their second car in 1986, thus putting an end to weeks of conjecture.

FEBRUARY 1ST

Ken Tyrrell officially announced the name of his sponsor for 1986, Data General, the American micro-computer manufacturer. Data General will be supplying 50 % of the British team's budget, a figure which could rise to 100 % for 1987 if all goes well.

FEBRUARY 3RD

Testing of the Brabham BT 55 at Estoril finished after a week on the Portuguese circuit. Rain fell every day and weather was generally cold. De Angelis managed fastest time (1m 20.8s) with the latest Pirelli slicks during one of the short dry spells. Patrese

Keke Rosberg gets acquainted with his new team as the McLaren mechanics get on with the job of looking after the MP4-2B. "We have been working mostly on fuel consumption and engine electronics," pointed out Prost, "and I don't think we'll have any problems from that point of view. However, I'm a little worried in that the McLaren's power has been down compared with that of the Williams and others."



had already achieved 1m 19.22s on the Portuguese circuit with the BT 54 but on qualifying tyres. De Angelis went on to put in a lap of 1m 40.33s in the rain. To give some idea of the value of that time, the fastest lap during the wet 1985 Estoril GP was Senna's 1m 44s.

FEBRUARY 7TH

René Arnoux started to get acquainted with the Ligier during testing at Paul Ricard. Fastest time for the Frenchman was 1m 04.05s.

FEBRUARY 10TH

Andrea de Cesaris was announced as driver with Minardi for 1986.

FEBRUARY 13TH

Gerhard Berger was chosen as second driver of Teo Fabi in the Toleman-Benetton team.

FEBRUARY 17TH

Eddie Cheever is announced as driver for the second Tyrrell alongside Brundle. Testing started again in Rio and Senna was immediately fastest of the day with a 1m 32.44s in the new Lotus. Prost was not happy with his McLaren's motor but nevertheless managed second time, 1m 34.51s, whilst de Angelis put in a 1m 34.71s in the revolutionary BT 55 Brabham despite spending little time on the track.

FEBRUARY 18TH

Whilst Enzo Ferrari was celebrating his 88th birthday, Johansson was busy setting second fastest time of the day in Rio (1m 34.12s) but Ayrton Senna was again the man to beat (1m 32.95s). Rosberg, steadily getting used to his McLaren, beat team-mate Prost's time of the day before by 0.09s and Piquet

One of the most debated subjects during the interseason was who was going to be the second driver at Lotus. The final choice fell on the 27 year-old Scot, Johnny Dumfries who celebrated by recording 5th fastest time in Rio on qualifying tyres.



demonstrated that he had fully recovered from the flu by putting in 1m 35.26s in the Williams/Honda.

FEBRUARY 19TH

Nigel Mansell showed all his potential by setting fastest time of the day in Rio. On only his first day of testing, he put in a 1m 31.49s with the latest Williams after spending most of his time in the pits. Another driver to spend little time on the Jacarepagua circuit, de Angelis, managed an impressive 1m 32.84s. The engine started to misfire towards the end of his fastest lap and the disappointed Italian driver maintains that he would have been fastest without his problem. Senna's time of 1m 32.24 was second best of the day.

FEBRUARY 20TH

Again it was Mansell the fastest man in Rio and the British driver was the first to break the 1m 30s barrier with 1m 29.73s. The Brabhams were able to get in more laps than usual and de Angelis (1m 31.61s) was very close indeed to Senna's time of 1m 31.23s, second fastest of the day.

FEBRUARY 21ST

Renault present a major technical breakthrough in Rio which could well have important consequences in F1 engine design; a new pneumatic valve closing system which does away with the need for springs. Meanwhile, out on the circuit, Piquet beat the fastest time set by Senna



Spot the common denominator between the Ligier (below) and the Lotus of Ayrton Senna (above). Both have Renault engines and both have flames coming out of the rear end! Despite these incidents, caused by an oil leak after turbo failure in the case of the Lotus, the Brazilian driver was by far the man to beat on home ground.



in January (1m 27.16) with a 1m 27.15s on qualifying tyres. On soft race tyres, the Brazilian managed 1m 28.7s. René Arnoux had finally come to grips with the Ligier, setting second time of 1m 31.53s on qualifying rubber and 1m 32.7s on race tyres. Unfortunately his day came to an untimely end when a fire broke out on the JS27, causing extensive damage to the car. Marc Surer showed well with a 1m 32.05s on qualies whilst Prost's McLaren had engine failure.

FEBRUARY 22ND

Last day in Rio for most teams and the day was devoted to testing on qualifying tyres and long distance testing. Piquet set off to put in 62 laps with the Williams only to run out of petrol on lap 60! Prost had less problems and finally got below the 1m 30s barrier on qualies but Senna was in great form and got below 1m 27s on three occasions. Fastest times of the week: (on qualifying tyres) Senna: 1m 26.39s. Alboreto: 1m 27.91s. Johansson: 1m 28.4s. Prost: 1m 28.79s. Dumfries: 1m 30.73s. (On race tyres) Piquet: 1m 29.44s. Prost and Senna: 1m 31.3s. Rosberg: 1m 32.6s. Mansell: 1m 33.4s. De Angelis: 1m 34.2s.

The rest of the month of February for most teams was spent sorting out the lessons learned in Rio and, in early March, everybody was busy packing their bags in preparation for the trip back out to South America, this time for real. Verdict in the next issue of GPI.

It was good to see RAM present in Rio despite the uncertainty that surrounds their future in F1. Thackwell (picture) has decided to take up an offer in F2 in Japan but team-manager, John MacDonald is keeping his fingers crossed that the deal with a consortium of Australian businessmen will come off.

MONEY MAKES THE (F1) WORLD GO ROUND

HOW MUCH MONEY DOES A GRAND PRIX RACE BRING IN? WHAT HAPPENED TO THE MONEY YOU SPENT ON YOUR LAST GP TICKET? WHAT ARE THE EARNINGS OF POLE-POSITION AND RACE WINNERS? WHAT SHARE GOES TO FOCA? WHAT IS THE INVESTMENT REQUIRED TO SET UP YOUR OWN F1 TEAM? GPI TAKES A CLOSER LOOK AT ONE OF THE LESSER KNOWN ASPECTS OF FORMULA 1.

by Bob Harrop





"ONLY THE FASTEST TWENTY DRIVERS RECEIVE A BONUS FOR THEIR PERFORMANCES DURING QUALIFYING"

Officially it is the FISA, the international motorsport governing body, that is responsible for the administration of all aspects of Formula 1, including the financial side. The 'Concord Agreement', signed on April 22nd, 1981, is a document which guarantees a certain discipline in a sport which is rich in political goings-on. FISA is also recognised in the paper as the sole qualified body to look after all regulations, including technical, concerning F1 but at the same time FOCA, the Formula One Constructors' Association, is given a major say in what goes on. Boss of FOCA is none other than Bernie Ecclestone, Brabham team-manager.

FOCA's main role is to administer the enormous amounts of money that the sport generates. Although all rights belong to FISA and to the FIA, these two organisations have agreed to allow Ecclestone's 'union' to control exclusively all television, video and camera rights in F1, in return for a percentage on money earned.

A few figures: How much does it cost to put on a Formula 1 race? Like OPEC, FOCA's pricing policy has been inflationary. Judge for yourself. In 1977, an organiser could have put on a Formula 1 race for 170,000 dollars. By 1979 that figure had risen to 250,000 dollars, 375,000 dollars by 1980, 680,000 dollars by 1982 and 1,100,000 dollars for 1984! For the current season the amount will have dropped to 1,000,000 dollars, good sense will have prevailed.

That sum, fixed with the organiser in writing beforehand, is transferred to FOCA in two instalments, 50% before the race and 50% on the first possible day following the race. It would appear that some organisers have a nasty habit of forgetting about the second payment. Bernie Ecclestone, or his accountant, puts the money into Barclays Bank in Reading in an account opened in the name of the Constructors' Association and the cash is then immediately redistributed following an agreed procedure.

To get a better understanding of where the money goes afterwards, let us follow the example of last year's French Grand Prix, worth 1,000,000 dollars. FOCA retains 8% of that sum, \$80,000, for its own costs and as an emergency fund in case an organiser doesn't get enough spectators, in case a worthy F1 team finds itself sponsorless (or turbo-less!), etc. That leaves us with \$920,000 which is then split in the following manner:

- 20%, \$184,000, is distributed to the drivers according to positions obtained on the grid.
- 45%, \$414,000, is distributed amongst the drivers according to intermediary and final race results.
- 35%, \$322,000, is reserved for fixed costs, salaries and payments.

QUALIFICATION BONUS

Only the fastest twenty drivers receive a bonus for their performance during qua-

lifying. The six remaining starters have got to hope for a good showing in the race. Fastest in qualifying, ie pole position holder, takes 2% of the figure set aside, 2nd fastest takes 1.75%, 3rd 1.60%, 4th 1.5% etc. In real terms, and if our calculations are correct, that makes \$18,400 for fastest time, \$16,100 for 2nd, \$14,700 for 3rd, \$13,800 for 4th, etc.

DURING AND AFTER THE RACE

Similarly, only the leading twenty drivers earn bonuses for their intermediary positions but it is rare that there are still over twenty drivers left in the race after half an hour or so. This is where things start to get interesting. 5.35% of the total figure, ie \$920,000, are given away after quarter race-distance, half race-distance and three quarter race-distance which leaves 29% for distribution according to the final results. Here again only the top twenty are concerned although there are frequently less than 15 finishers in Grands Prix today (9 at Estoril in '85, 8 at Dallas in '84 and only 5 at Detroit '84 and Imola '82!). Monies not paid out go into a common kitty and are saved for a rainy day. Earnings for leading drivers after 1/4, 1/2 and 3/4 race-distance are: 1st: \$9,500, 2nd: \$7,200, 3rd: \$5,800, 4th: \$4,700, 5th: \$3,600, etc.

Earnings from end-of-race bonuses are more substantial and the differences between the different positions are wider. 1st: \$50,000, 2nd: \$38,000, 3rd: \$31,000, 4th: \$25,000, 5th: \$19,000, etc.

Let's look at some examples. South Africa 1985. Mansell takes pole-position and leads near enough from start to finish. Rosberg leads for a short spell after 8 laps but that has no bearing on his bonus at the end of the day. Mansell earns \$18,400 for his pole-position +

QUALIFYING BONUSES

1st (Pole Position):	\$18,400
2nd:	\$16,100
3rd:	\$14,700
4th:	\$13,800
5th:	\$12,900
6th:	\$12,000
7th:	\$11,000
8th:	\$10,100
9th:	\$9,200
10th:	\$8,300
11th:	\$7,800
12th:	\$7,400
13th:	\$6,900
14th:	\$6,400
15th:	\$6,000
16th:	\$5,500
17th:	\$5,050
18th:	\$4,600
19th:	\$4,150
20th:	\$3,700



\$9,500 + \$9,500 + \$9,500 + \$50,000. A total of \$96,900. Not bad for a weekend's work! That's the theory anyway, because Mansell is on a fixed salary basis at Williams and his bonuses go to the team. In fact, nearly all the leading F1 teams operate in this manner, except in some cases where the driver gets a percentage of the bonus. In that way, team-managers can be sure that their drivers will be out to do their best and, sometimes, it allows them to avoid taking a financial risk. For example, it was the solution adopted by Ron Dennis

and Marlboro when they refused to agree to Niki Lauda's demands when he joined McLaren.

Getting back to the South African GP, Alain Prost qualified in 9th position (\$9,200) was second at 1/4, 1/2 and 3/4 race-distance (\$7,200 x 3 = \$21,600) and crossed the finish line in third place (\$31,000). A total of \$61,800.

Boutsen was 10th on the starting grid (\$8,300), was 8th at 1/4 and 1/2 race-distance (\$1,990 x 2), 5th after 3/4 of the race (\$3,600), finishing eventually

Bernie Ecclestone is the man behind FOCA (Formula One Constructors' Association) which, since the signing of the Concord agreement in 1981, has a major say in what goes on in the sport.

6th after stopping at the pits to change tyres (\$14,700). Total: \$30,560. Another example: The Australian GP in November where Senna and Rosberg kept us entertained for most of the race. In Adelaide, 82 laps of the circuit were planned. Where the number of race laps is not divisible by two or four, 1/4, 1/2 and 3/4 race-distances are taken at the end of the following lap, ie for the Australian GP that gives us 21, 41 and 62 laps respectively.

Senna: pole-position (\$18,400), 2nd after 21 laps (\$7,200), 1st at half-way (\$9,500), then retirement. Given the lead he had when he left the race, the Brazilian was still officially in 7th position after 63 laps, giving him an extra \$2,200. Total for Senna: \$37,300.

Rosberg: 3rd in qualifying (\$14,700), leader after 21 laps (\$9,500), 2nd at mid-distance (\$7,200), back in the lead after 62 laps and eventual winner (\$9,500 + \$50,000). Total for the Finnish driver: \$90,900, not a lot less than Mansell who obtained the grand slam in South Africa.

Young French driver, Philippe Streiff, scored the best result of his F1 career in Adelaide. How do his earnings work out? 18th after qualifying (\$4,600), he was already 7th after 21 laps (\$2,200) before dropping to 9th at half-way after a tyre change (\$1,750). He managed to climb back up to 3rd place after 63 laps and, despite his incident with Lafitte, held onto that position until the end of the race (\$5,800 + \$31,000). Streiff left the Southern hemisphere \$45,350 richer.

Martini was less fortunate. On the grid in 23rd position, he received nothing. 17th (\$720), 13th (\$1,160), 8th (\$1,990) and finally 8th, the Italian took away \$14,470, enough perhaps to cover a few expenses...

Until now, we have talked only about bonuses earned during races, either during qualifying, during the race or after it. With GPI's statistics pages, it is

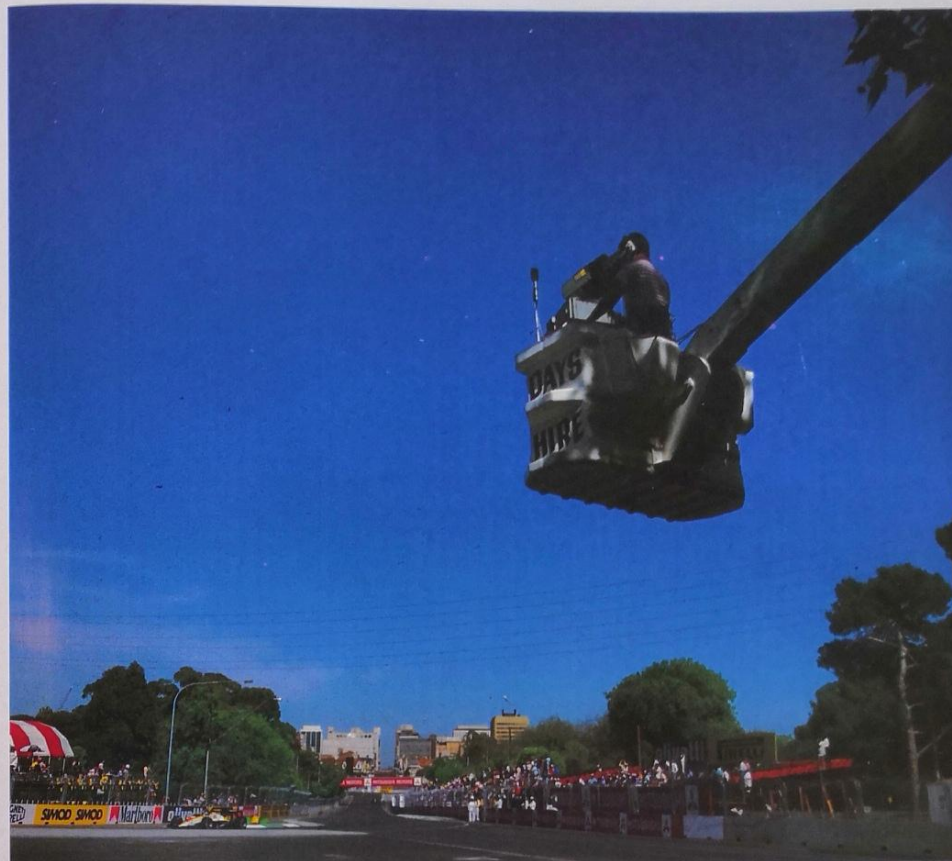
relatively easy to work out how much each driver brings in although, as we said earlier, it is rare that these amounts go straight into drivers' pockets. Today's contracts are generally based on fixed salaries, or on fees payable by the team or the sponsor in one or more instalments. Nowadays, of course, it is not rare that drivers actually pay to drive, but as a general rule most of the money goes to the team, members of FOCA or not (eg. Ferrari).

FIXED PAYMENTS

Originally, these were the only sums that the teams received but, as we have seen, drivers' earnings now go into the teams' coffers more often than not.

As mentioned above, 35% of the total figure to be distributed is given out in this way. It is divided into two equal parts, ie \$161,000. One half is distributed proportionally according to the number of championship points obtained during the two preceding half-seasons and the other half goes to the 10 leading teams (twenty cars) according to their championship position after the same period.

As you will have noticed, and no doubt imagined in any case, a single GP represents a lot of money to a lot of people. When you think that the F1 calendar takes in 16 races, you understand just how much is involved in a year: \$16,000,000! However, when you realise how much stars like Prost, Piquet, Senna and Rosberg actually earn, it is clear that FOCA alone could not supply enough money. Until now, we have talked only about receipts from GP organisers but there are other lucrative sources of revenue, television, video and cinema rights for example. There were 1.38 million spectators at the 16 GPs run in 1982 but a further 769 million followed the races on TV! Roughly \$2,500,000 supplementary earnings



are obtained through television rights of which 7.5% (\$187,500) go to FISA, 33% (\$825,000) go to FOCA, whilst the remainder (\$1,487,500) is distributed amongst the teams. As we have said, TV rights are the property of FISA but are administered and controlled by FOCA in a manner which FOCA considers the most healthy for the sport. Cinema rights are also under FOCA's control but rare are the film directors nowadays that have enough capital to pay them. They prefer Rallyes or Endurance races, where Ecclestone's organisation has no influence... yet!

OTHER ADVANTAGES

There are other advantages that go with belonging to FOCA. There are the free tickets and privilege passes of course but, more importantly, reduced transport for races outside Europe is also arranged. Airport taxes, custom clearance, handling, loading and unloading are often all at the expense of the

organiser. When you're talking about a trip out to the USA or Australia, that's quite some saving. Also paid for by the organisers is unlimited third party insurance for all members of FOCA, competitors (whether they be members of FOCA or not), and the employees, agents and even guests of the said competitors. Looking after the books of FOCA is not an easy task. The accounts are regularly gone through by experts appointed by the teams themselves. Teams also have right of access, without charge, to the accounts at any time.

Another area of FOCA's activities is the organisation of GPs. Thanks to its substantial 'emergency fund', the Association hires the use of a circuit plus its facilities (marshals, security, etc) and pays for the operation through sales of tickets, billboard advertising revenue and a 'share' on sales made by sales of T-shirts, chips, lemonade etc by circuit vendors. The system works well for the Grands Prix at Hockenheim, Dijon or even Brazil. We doubt very much if the same can be said for circuits like Estoril, Kyalami or Nürburgring but, apparently,

Over 750 million television viewers follow the season's Grands Prix each year. TV rights are controlled by FOCA and represent an annual revenue of around \$2,500,000.

**"IT IS EASY TO FEEL
NOSTALGIC WHEN YOU
CONSIDER THAT THE OLD
COSWORTH ONLY COST
AROUND \$30,000"**

INTERMEDIARY AND FINAL RESULTS BONUSES

1/4 race distance	1/2 race distance	3/4 race distance	End of race
1st: \$9,500	1st: \$9,500	1st: \$9,500	1st: \$50,000
2nd: \$7,200	2nd: \$7,200	2nd: \$7,200	2nd: \$38,000
3rd: \$5,800	3rd: \$5,800	3rd: \$5,800	3rd: \$31,000
4th: \$4,700	4th: \$4,700	4th: \$4,700	4th: \$25,000
5th: \$3,600	5th: \$3,600	5th: \$3,600	5th: \$19,000
6th: \$2,760	6th: \$2,760	6th: \$2,760	6th: \$14,700
7th: \$2,200	7th: \$2,200	7th: \$2,200	7th: \$11,800
8th: \$1,990	8th: \$1,990	8th: \$1,990	8th: \$10,600
9th: \$1,750	9th: \$1,750	9th: \$1,750	9th: \$9,400
10th: \$1,550	10th: \$1,550	10th: \$1,550	10th: \$8,250
11th: \$1,380	11th: \$1,380	11th: \$1,380	11th: \$7,360
12th: \$1,270	12th: \$1,270	12th: \$1,270	12th: \$6,770
13th: \$1,160	13th: \$1,160	13th: \$1,160	13th: \$6,180
14th: \$1,050	14th: \$1,050	14th: \$1,050	14th: \$5,600
15th: \$940	15th: \$940	15th: \$940	15th: \$5,000
16th: \$830	16th: \$830	16th: \$830	16th: \$4,420
17th: \$720	17th: \$720	17th: \$720	17th: \$3,830
18th: \$610	18th: \$610	18th: \$610	18th: \$3,240
19th: \$500	19th: \$500	19th: \$500	19th: \$2,650
20th: \$330	20th: \$330	20th: \$330	20th: \$1,770

FOCA enjoys this part of its role and is prepared to accept that losses are sometimes made. That's one of the reasons the 'emergency fund' exists.

A BOTTOMLESS PIT

Having talked about the receipts side of Formula 1, let's take a look at costs. The amounts involved are so huge that it is certain that, without sponsors, F1 could no longer exist as we know it. Colin Chapman brought the existence of sponsors out into the open when he baptised his team Gold Leaf Team Lotus back in 1968. It caused a scandal at the time but sponsors had existed before then, it's just that nobody ever talked openly about them. The amounts involved at the time were very small, certainly insufficient to cover the complete budget of the team. It was rather a more or less disguised financial help from petrol companies or tyre and spark plug manufacturers.

As the principle of sponsorship developed, F1 began to get progressively more and more professional. Teams could now employ more full-time mechanics, could offer higher salaries in order to attract top drivers and could afford to invest in research. It was a completely new era in the sport, much to the regret of a great many purists who predicted the downfall of Formula 1 as a result. Today it is very difficult indeed to imagine where we would be if it weren't for this important source of revenue. Would, for example, the likes of Rosberg, Prost and Alboreto have been able to become world famous masters in the art of motor racing or would we still be in a situation where gentlemen drivers from rich families were the only ones who could afford to compete? Would F1 otherwise have gained its worldwide reputation? Would we have seen the sport's technology develop in the way it has done? Most probably not. Let's talk figures again. Or let's try, because if it's very difficult to get hold of FOCA's financial structure, it's near impossible to get even an approximate idea of a Formula 1 team's balance sheet. Luckily, some information does filter through and some sponsors do not hesitate to give precise accounts of their involvement.

It is nevertheless impossible to give an exact description of a team's budget, especially since not all the teams operate in the same way. But let's take Ferrari as an example. Enzo Ferrari, a genuine living legend, has always claimed that he runs his F1 operation on the budget of an artisan. However, his is a veritable industrial organisation with huge resources. His special relationship with Fiat, whose colours his cars carry, brings him in around \$300,000 a year. If you add the money received from FOCA as described above, it is clear that that is not enough to pay 198 employees, including 14 engineers, and to finance the design of his F1 single-seaters which are entirely built by Ferrari, including engine and

gearbox. The Marenello workshops are ultra modern and expanding.

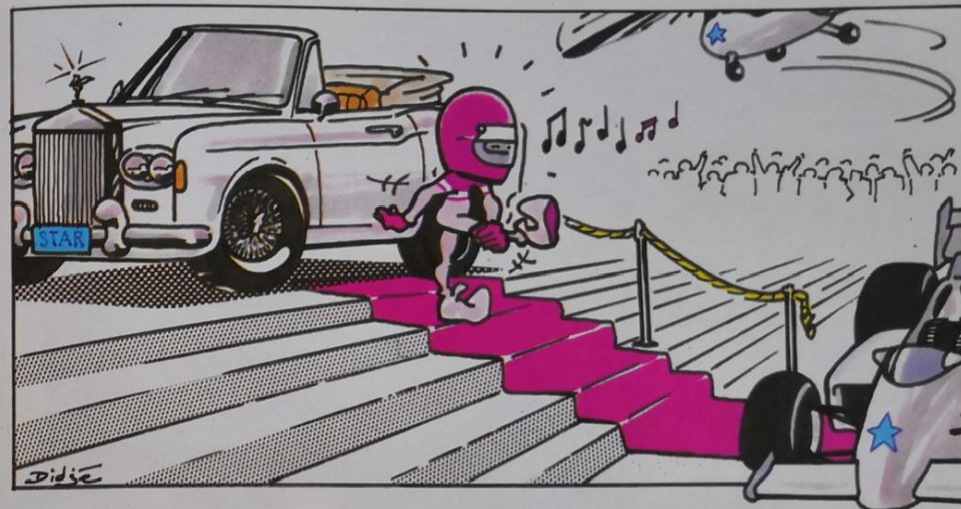
The money for Ferrari's F1 team comes principally from the company's 'production car' activities, on the basis of a fixed commission on each sale. So, for every Testa Rossa you buy, you are indirectly participating in Alboreto and Johansson's careers. In 1958, this commission was fixed at 8.7%. In that year, the Italian manufacturer turned over 5.2 billion lire, of which 452 million lire went to the competitions department. As a company, Ferrari has continued to expand and in 1979, 3.9 billion lire were set aside for Formula 1. In 1980 the sum was 5.54 billion and in 1981, 5.81 billion. The amounts were staggering and the management took the decision to drop the percentage from 8.7% to 5.5%. That didn't stop Ferrari making available 11.4 billion lire for its F1 activities in 1984 and for 1986 the figure can not be far off the 15 billion mark!

Ferrari maintain that their cars are entirely self financed. But the Commandatore also gets financial support from Goodyear tyres and AGIP oil and petrol, as well as technical backing from Gould, the American electronics company, and Brembo brakes. Nor should the value of the use of Fiat's drawing offices and Pinninfarina's wind tunnel be left out of the formula.

A few years ago, the rumour went around that Enzo Ferrari, given the vast expenses involved in the sport, was going to fall in line with the other teams and take on a sponsor. "Never in this world," cried out an indignant Enzo. "I neither smoke nor drink and my cars won't either." Obviously he was thinking of Marlboro and Martini. Then, in 1984, a Marlboro sticker was spotted on the side of his cars. The Commandatore had unexpectedly accepted a financial backer from outside the sport! Worse, it happened to be a tobacco company. In reality, however, he doesn't see a penny of this new source of revenue and, arguably, has remained true to his policy. The deal is that the cigarette giant pays the salaries of Alboreto and Johansson in return for the small sticker. The saving for Ferrari must be quite considerable given the salaries of top drivers today. In conclusion, the Ferrari team would appear to be the richest team in F1 at the moment with an annual budget in the region of 20 million dollars!

Enzo Ferrari has often been asked to give some exact budget figures but he has never given an answer. Except perhaps at the end of 1984 when he stated that the season had cost him 3.5 million dollars. He was no doubt talking about the sum that Ferrari as a company had to pay out to make the budget balance for that year.

Renault no longer actively compete in Formula 1 now but they too were able to profit from their position as a major automobile manufacturer. Apart from the technical and human resources which were available to the French outfit and whose value it is difficult to estimate, the



Formula 1 team was allocated an amount equivalent to 1/1000th of Renault's turnover each year until the latest General Manager, Georges Besse, put a stop to that.

Frank Williams' team can also be considered as one of the bigger set-ups around. The boss himself explains: "In 1983, I began to look at ways of investing in the factory, machines, staff, etc. It was a policy which I knew was going to cost a lot but if you want to make a success of things there's no choice. Every year I spend about \$16,000,000 to \$19,000,000 on Formula 1, without counting the Honda engines which I don't pay for. Without their help, the season would cost me a further \$5,000,000. The factory cost \$1,625,000, the quarter scale wind-tunnel over \$90,000. I am responsible for a staff of 95, including 8 engineers who work with Patrick Head. We were the first true F1 professionals and I mean to stay professional. Unfortunately, it's a policy which requires more and more money to follow. I would say that you need a minimum of \$5,000,000 to succeed in Formula 1, more if you want to win. There are obviously some that manage without that amount. I shouldn't complain."

Bernie Ecclestone manages the Brabham team as well as FOCA and his opinion goes along similar lines to that of his rival. With support from BMW, Pirelli, Olivetti, etc, Brabham's budget must be somewhere in the region of 10 million dollars. His main bone of contention is that drivers' salaries are far too high to his mind. We'll come back to that subject in a minute. McLaren are about the only other team with such a vast budget.

How much has the arrival of Mansour Ojeh meant to the World Champions? Ojeh is a Saudi millionaire based in Paris who, one day, had the idea of

ordering a Formula 1 engine from Porsche. You'll agree that it was a particularly sound idea, given that McLaren is a regular buyer of the said engine... and Ojeh also owns McLaren.

EVERYTHING IS RELATIVE

At a slightly lower level, there are a number of teams. Ligier's budget is around 8 million dollars (4.5 million from Loto, 1.5 million from Gitanes, 1.2 million from Elf, 1 million from the French government, etc) whilst Arrows receive 6.5 million. You would have thought that a budget like that would allow you to get some serious work done. Unfortunately, and here we come to one of the crucial problems at the moment, they have to buy their engines. Guy Ligier's contract with Renault expired at the end of last year and he had to look around for a replacement engine for '86. With no other realistic possibility open to him, Ligier was obliged to accept Renault's proposition: 30 million francs for the hire of the equipment and servicing necessary to run two cars for a season. The cost of an engineer's salary is included in that figure! As far as Lotus is concerned, they pay only 12 million francs for the same engines since they are still working to a contract concluded before Georges Besse's arrival at Renault. Add to the engine costs the different charges related to building the cars themselves, use of wind-tunnel and general costs. It's easy to see that a team-manager's life is not all cocktail receptions and sunshine.

The Arrows team serves as a further example. In 1985, Arrows bought 17 BMW engines at \$75,000 a piece. The unfortunate British team experienced a number of engine failures and problems and each motor costs between \$18,000

**"IF AN AVERAGE DRIVER
CAN SHINE IN A GOOD CAR,
AN EXCELLENT DRIVER CAN
WORK MIRACLES IN THE
SAME CAR"**

**"YOU NEED A MINIMUM
OF \$5 MILLION TO SUCCEED
IN F1, MORE IF YOU WANT
TO WIN"**



**"THE MAJORITY OF THE F1
STARTING GRID EARN ONLY
A FEW THOUSAND
DOLLARS"**



and \$30,000 to service. Even without the breakdowns, each engine needs to be rebuilt every 300km, ie after each GP. In the face of these costs, Arrows were forced to return a number of their engines to BMW, only to hire them back. It is difficult not to feel nostalgic when you consider that the old Cosworth used to cost around \$30,000. Guy Ligier remembers those days. "There used to be only \$3,000 difference in the price of the best and the least good Cosworth," he recalls. "The difference in power output between the least and the most powerful was around 25/35 bhp. It's a nightmare to think that some people are paid to break engines, whereas I've got to spend a

fortune for mine with no guarantee of success. The arrival of turbos and of major car manufacturers like Renault was a sad day for F1." The Toleman team has also been affected by engine costs. Toleman spent about \$1,300,000 a year with Hart. When, under pressure from their sponsor Benetton, Toleman were forced to go to BMW for their power, the bill suddenly shot up; sixteen race engines at \$750,000 each, five qualifying engines at \$1,000,000 each, bearing in mind that rebuilding a qualification engine costs up to three times more than a race engine. Toleman could not afford such costs and Benetton made the most of the situation by buying out the British

team. The operation will have cost \$2,000,000 plus an investment of \$11,250,000 over three years. Toleman could possibly have gone elsewhere for their engines but at what price? Ligier at one time had talks with TAG/Porsche and a figure of over \$5,000,000 was mentioned!

DRIVERS GET THE LION'S SHARE

Drivers' salaries are a touchy subject with team-managers. Basically, drivers fall into one of three categories: — highly paid stars,

— drivers with modest results to date and moderate salaries,
— drivers either with no results to date, little apparent talent, who are wealthy, who have a personal sponsor or the support of a tyre or engine supplier. There's no secret for success in the World Championship. If an average driver can shine in a good car, an excellent driver can work miracles in the same car. The manager of a top team has no choice. Listen to Mr. Ecclestone. "Two good drivers in a team represent 40% of the total budget. When I started looking for drivers for the 1985 season, I soon found out that not one of the six best drivers was asking for less than 3 million dollars! There is the solution of taking on

Victory in Australia last november was worth more than just a silver platter. Race winner Rosberg (centre) earned over \$90,000 for the Williams team.



**"IT IS VERY DIFFICULT TO
IMAGINE WHERE F1 WOULD
BE TODAY WITHOUT
SPONSORS"**

one top driver and a second, less experienced driver. Even then, you're saying goodbye to 5 million dollars. The men behind the wheel aren't the only ones to claim high wages. A top engineer/designer can easily ask for and get 1 1/2 million dollars. That I can accept, given the hours they work and their responsibilities. On top of that, I've got 90 other staff to pay, plus the travelling expenses of about 30 of those who go from GP to GP. For each race, at least 8 tons of material are sent out by plane. The overall bill comes to around 8 or 9 million dollars. Those who have got to buy their own engines have got a further 4 or 5 million to lay out, or between 8 and 10 million if they plan on developing their own. It's incredible. Where do you start looking for a sponsor capable of spending that much money?"

Obviously, the fees demanded by the top drivers are considerably high and even the richer teams are concerned. What is the solution? Where demand and supply are primary influences, it is difficult to come up with an answer. In fact, now that Niki Lauda has retired it appears that the situation has worsened as there are few drivers that can replace him at McLaren, probably just Piquet, Rosberg and Alboreto. Together with Prost, the three got together and founded the '3 million dollar club', in other words an agreement to refuse negotiations below the figure that the Frenchman was already worth in 1985. Alboreto refused the deal offered by McLaren during 1985 because his contract with Ferrari still stood. Rosberg stepped in and accepted which prompted Piquet to ask for an increase which was refused by Ecclestone. The Brazilian driver consequently left Brabham to join forces with Williams, with a contract worth 3.3 million dollars. Meanwhile, Niki Lauda refused an offer of 5.5 million dollars from BMW who would like to have seen the Austrian drive for Brabham. BMW will still be using the services of the former World Champion as 'consultant' for a fee of 800,000 dollars spread over three years.

Senna, too, has become aware of his value on the market and managed to

push up his salary with Lotus during the interseason. His contract with them lasts until the end of this year, but how many propositions has he received to break that contract? Lotus managed to keep the Brazilian star by digging deep into their pockets and by leaning very heavily on their sponsor, JPS. At the end of the day, the British team had no funds available to take on another experienced driver.

After the superstars, come a number of averagely paid drivers who earn between 600,000 and 900,000 dollars each. De Angelis, for example, but also Mansell, Tambay, Johansson, Jones... René Arnoux is a special case. Before his eviction from Maranello, he was on a similar level to De Angelis etc. After a year of inactivity, he has considerably lowered his asking price and is now at about the same level as Boutsen, ie around 400,000 dollars.

THE PRICE OF PASSION

In the shadows, the majority of the F1 starting grid earn only a few thousand dollars. Those without any appreciable results justify their drive by bringing along their own budget, like Martini for example who bought his 1985 season with Minardi for 600,000 dollars. Streiff was able to participate in two GPs with Ligier last year thanks only to a personal sponsor worth 300,000 dollars. So how do these young drivers manage? Mostly thanks to a small percentage they deduct from the money they bring with them or thanks to bonuses given by their employers according to the results obtained. As a rule, team-managers allow drivers to keep a space on their racing overalls for small sponsors. At McLaren, it is a condition that any personal sponsor is adopted by the whole team and their badges are worn by everybody. All revenue thus earned goes into the overall kitty. Alboreto and Johansson are not allowed to deal with anyone unless Ferrari and Marlboro give their approval. Their racing garments only display the logos of those companies with whom Enzo Ferrari has dealt directly.

Once again, Arnoux is a special case. Ligier cannot afford the salary that the French driver is asking for and has come up with a compromise. He will pay Arnoux a relatively low salary but has reserved certain parts of the JS 25 for the former Ferrari man's exclusive use. The ball is now in Arnoux' court to make the most of that possibility, either for the year or race by race. Apparently it is a solution that suits everybody.

Not to be forgotten in this look at the costs involved in F1 are travelling expenses, workforce, aerodynamic research and the actual build of the car which we have tried to cost out elsewhere in this article.

You must have realised by now that if you're out to get rich quick, unless you are going to be the manager of one of the top teams, don't get involved in Formula One.

PAYMENTS TO F1 TEAMS

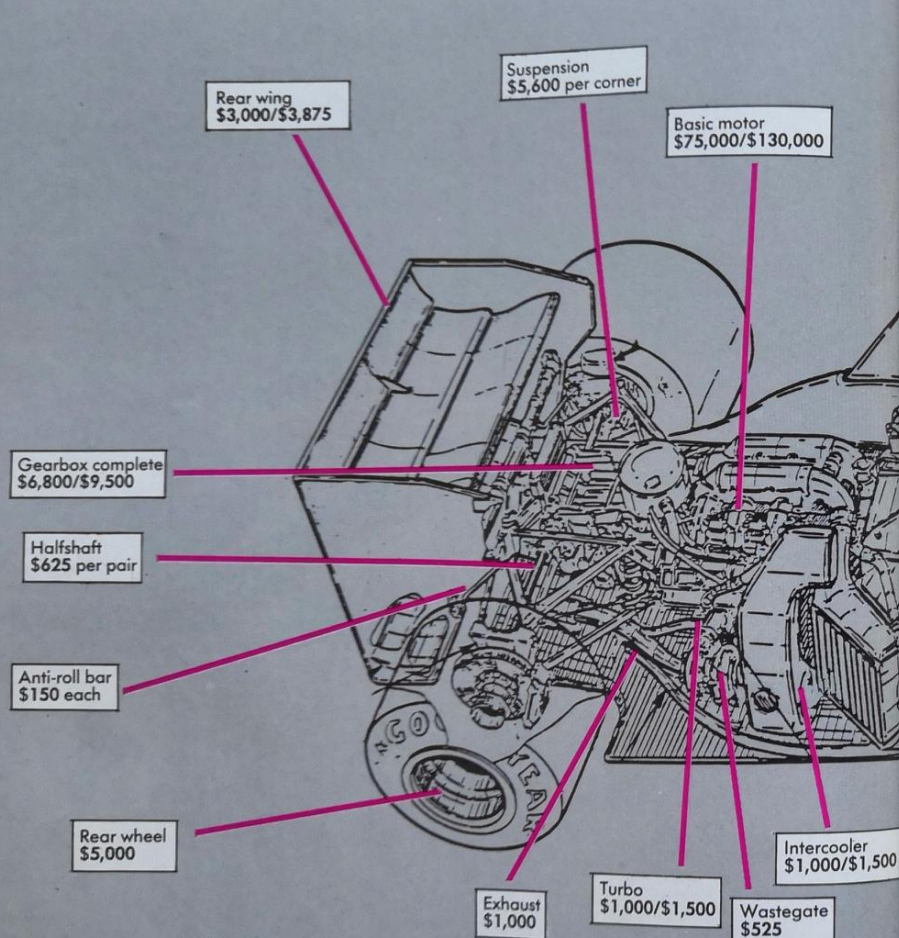
\$161,000	distributed equally amongst the best ten teams of the two preceeding half-seasons.
\$322,000	\$161,000 distributed according to the number of points scored to the best ten teams of the two preceeding half-seasons



The small Marlboro sticker behind Alboreto is worth a lot of money to Ferrari. The tobacco giant pays both the Italian driver's and Johansson's salaries.

INSIGHTS

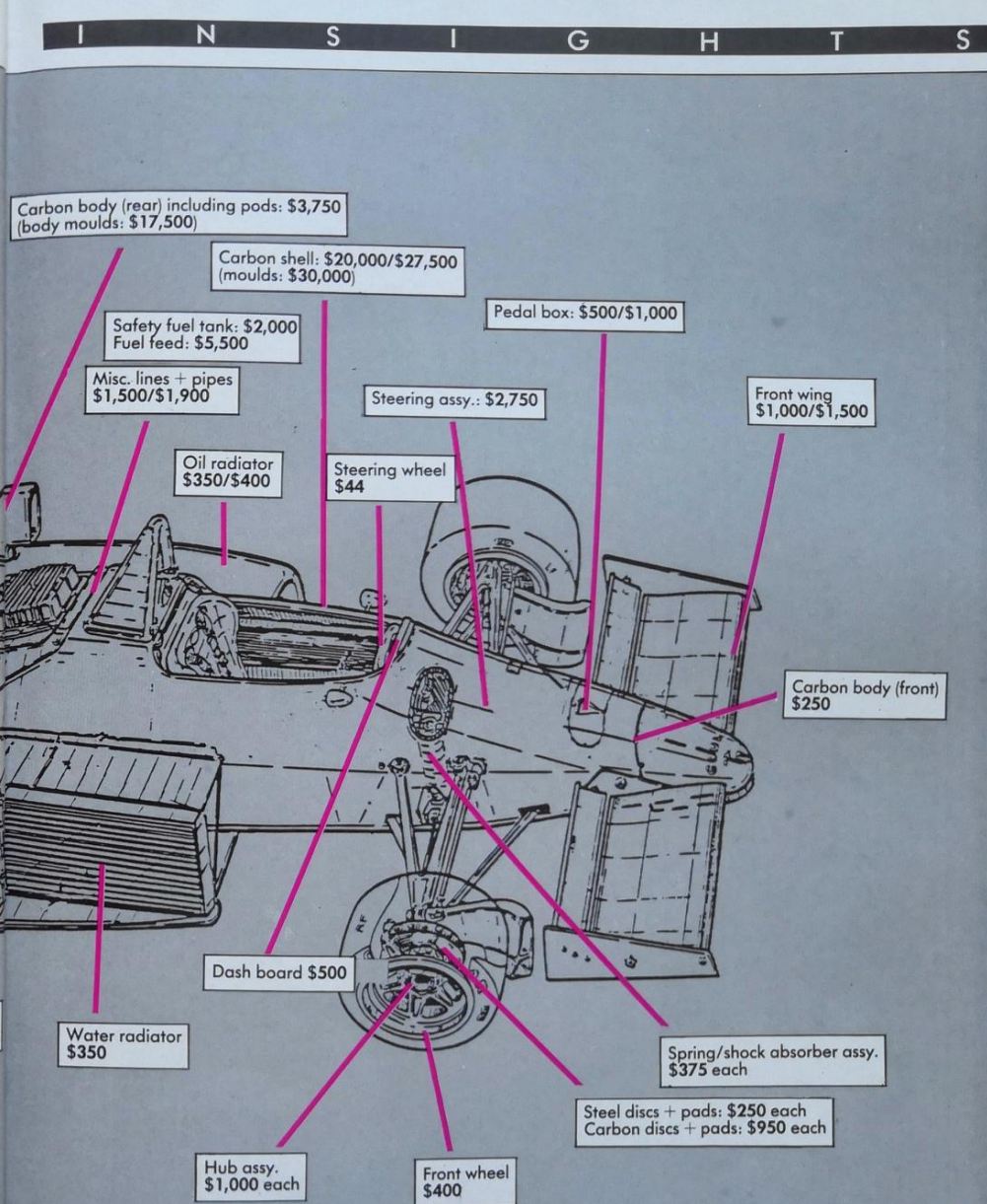
BUILD YOUR OWN FORMULA 1 CAR



OR JUST SPONSOR YOUR OWN CAR

If you're the marketing director of a leading international company and you want your product to be known the world over, why not sponsor a Formula 1 car? A few examples of how much it would cost you: To get your brand name on the sides of the Osella would cost you \$625,000, the same spot on the Ligier costs Gitanes \$1,875,000. For \$1,500,000 you could have the sides and the back-facing panel of the rear wing on either the Tyrrells or the Arrows. Enzo Ferrari would listen if you proposed \$1,875,000 to replace the Marlboro sticker with yours. The site of the Shell sticker on the McLarens could be yours for just \$625,000 or the Boss sticker for \$440,000.

If you're really looking to make an impact, you would need \$7,000,000 for the entire McLaren bodywork and Lotus would probably ask for a similar fee. The Olympus publicity on the Lotus cars cost \$1,000,000 but for that price they also get their name embroidered on the drivers' overalls. The Williams team adopts a similar system where the cost of Canon and ICI's advertising was between \$2,000,000 and \$2,500,000 in 1985. But if you're out for a bargain, go and see Minardi. For a mere \$500,000 he could well be interested in giving you the space taken up by Simod last year.



TRAGEDY IN TWO ACTS

THEY HAD COME TO ENJOY THEMSELVES BUT THE PARTY SOON TURNED INTO A CATASTROPHE: A CAR WENT OFF INTO THE CROWD, 3 DEAD AND 30 INJURED. AS ONE, THE PROFESSIONAL DRIVERS DECIDED NOT TO CONTINUE OUT OF RESPECT FOR THE VICTIMS. LET'S HOPE IT'S A LESSON WELL LEARNED FOR THE FUTURE

—by Michel Lizin—



TEAM BY TEAM



It is unfortunate that the real 20th Rally of Portugal covered no more than three stages. Before the decision was taken by the top drivers to pull out, the event boasted one of the most exciting entries so far this year. Two Peugeot 205 T16s were present for Salonen/Harjanne and Kankunen/Piironen, three Lancia Delta S4s for Toivonen/Cresto, Biasion/Siviero and Alen/Kivimäki and one solitary Audi Sport Quattro S1 for Röhr/Geistdörfer. Both Ford and Austin Rover entered three

cars. Pond/Arthur, Wilson/Harris and Duez/Lux drove the three Metro 6Rs whilst the RS200s were entered for Blomqvist/Berglund, Grunzel/Melander and Santos/Oliveira. All the above mentioned crews took part in the meeting which resulted in their withdrawal from the event. Out of solidarity, Eriksson/Diekman and Wittmann/Feltz decided to refuse to restart with their Group A VW Golf GTIs.

When the rally finally restarted, the

Renault 5 Turbo of Moutinho/Fortes had inherited the lead and looked like keeping it. Amongst the remaining crews with a realistic chance of getting into the top three were Bica/Junior (Lancia 037), Rayneri/Cassina, Del Zoppo/Roggia and Florio/Arles (all Fiat Uno Turbo Gp A), Tchine/Thimonier (Opel Manta 400) and Fritzinger/Lejeune, Ortigao/Perez (Toyota Corolla).

RALLY OF PORTUGAL

The sunshine had made a welcome return to the countryside around Lisbon and the crowds that were steadily making their way to the stages of the famous Sintra loop were larger than ever. With the prospect of watching their heroes three times on the first day of the Rally of Portugal, for many it was the chance to spend a day in the countryside, devoted to motorsport and enjoyment. With the number of people crammed into the short stages, the Portuguese capital must have been totally deserted on this Wednesday, 5th March.

We carefully selected our vantage point, a classic spot on the last bend of the second stage, Peninha. From a grass bank about a metre high, we were able to spectate in total safety. In 1985, Timo Salonen's style here had left us breathless; a four-wheel drift with opposite lock, a perfect line with the Peugeot 205 entirely in control from one bend to another. Timo went on to win the event, so he was given the honour of bearing No. 1 this year and thus first to show. As he came into sight, it was clear that something was wrong, not the slightest attempt to accelerate between the two bends before lifting his foot from the accelerator as he crossed the stage finish line. The World Champion was no longer the same man. The traditional Finnish fighting spirit, the "sisu", was missing.

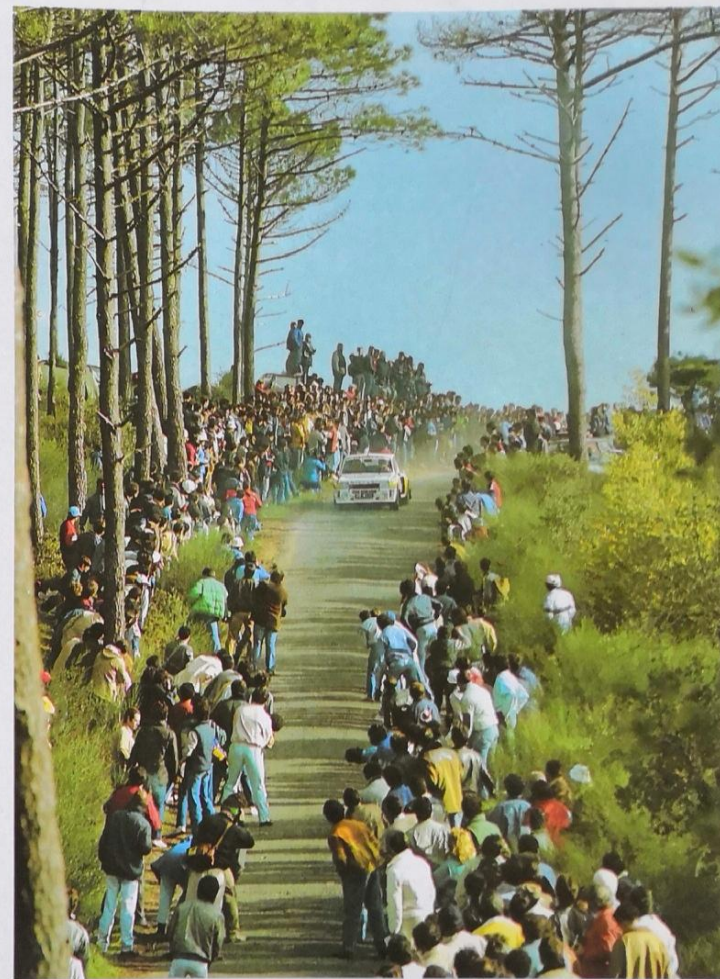
Next on the scene was Markku Alen who was visibly far, far quicker. A rasping burst of acceleration between the two bends. Alen is not on the ideal line but he forces the Delta's nose into the apex as soon as possible, flirting with the verge. The Lancia passes the finish line and Alen disappears towards his service crew.

CONSCIOUS OF DANGER

As we spoke with Timo Salonen alongside the Peugeot service vehicle, the reasons behind his half-hearted performance became clear. "This is the first time that I've started at number 1 in Portugal and I can tell you that being first car through the stages is an incredible and terrifying experience. The spectators just stroll along the middle of the road and don't even bother to turn around as we arrive. I was forced to brake a number of times in the middle of a straight, twice I had to weave my way between groups of spectators!

Further into the stage, I felt the rear end of my 205 start to slide out during a long right-hander. The car slid out further than I thought it was going to but I was in control, sideways but still on the road and on line for the following bend. But being in control didn't stop me from hitting a number of spectators. One of them must be badly hurt because the impact was sufficient to damage the car."

Henri Toivonen seemed very excitable too. "We've got 150bhp more compared with two years ago yet we were slower by 5 seconds. Do you know why?"



Simply because the spectators are no longer content just to line the route, now they are actually on it; as you enter the bends, as you exit from them, on the apex and on the outside. You're forever playing with the steering wheel to avoid hitting people's legs and arms."

Joaquim Moutinho won on home ground in front of his own irresponsible spectators

REACTION TO THE TRAGEDY

Markku Alen and Walter Röhr were more explicit. Even before they got together to share their anger, the two experienced drivers exclaimed, "Someone's got to put an end to this stupid game or else it's going to turn into a massacre."

As they expressed their horror, they were both unaware that Salonen had

SUDDENLY THE RULES HAVE CHANGED

"It was bound to happen." The most frequently heard phrase on the afternoon of the first day of the Rally of Portugal was "It was bound to happen." Crowds were estimated to be about 50,000 per stage, an average of 10,000 per kilometre. Given the excitability and unharnessed enthusiasm of the Portuguese spectators, that's a lot. This year they were present in greater numbers than ever before and were no longer satisfied with simply lining the rally route. This year they seemed to revel in being on the actual road itself.

The principle of the first day of the Portuguese is to run a loop of three stages three times in close proximity to the capital. Everybody knew that if ever a car left the road in the early part of the event, the consequences were sure to be serious. And so they were: three dead and thirty hurt.

Everybody knew, but nobody had done anything to avoid the tragedy. Probably because the Portuguese has lived with the risk for so long now as if protected by a guardian angel. On March 5th, 1986, the angel must have been watching somewhere else.

The drivers reacted immediately. The reputation of the Sintra loop is so frightening that the first threats of a boycott were voiced even before news of Joaquim Santos's accident filtered through. One wonders if they would have carried out that threat if the Ford driver hadn't gone off. We'll never know but it is unlikely, even if a catastrophe was more or less "bound to happen" on the second loop, or the third, or elsewhere during the rally.

It is true that precautions should have been taken much earlier. It is uncertain whether clearer spectator information, a modified route or whatever would have had any effect. It's not only in motorsport that it takes a catastrophe to make things move. After all, isn't that the way that society in general has tended to evolve? With or without the death of three spectators, crews are perfectly aware of the direction the sport is taking. For them, it suddenly seems absurd to brush against people's legs, passing within inches of human bodies with the accelerator pressed hard down to the floor. And for what? To win a few tenths of a second. There can be no pleasure in being part of a sport where the risk to outsiders is so high. Drivers are sufficiently sure of themselves not to complain when spectators 'simply' line the stages but when they come across irresponsible idiots in the middle of the road, exactly where the driver counts on passing, the rules of the game suddenly change. It's as though the drivers are playing at Russian roulette, the gun pointed at somebody else's temple.

The speed with which the drivers and co-drivers alike reacted is proof of their maturity. They alone had the power and the autonomy to act and, whatever the regulations say, it was most certainly their right to do so. The opinions of those who actually compete are the least often taken into consideration in motorsport. The dignity and confidence portrayed by the crews was extremely encouraging.

Alone, with no outside influences, they

witnessed the problem, analysed the consequences, decided on a joint action. Once their decision had been made known, they were immediately supported by their team-managers and by the majority of the press. But even without that backing, their minds were made up. Nothing could have changed that.

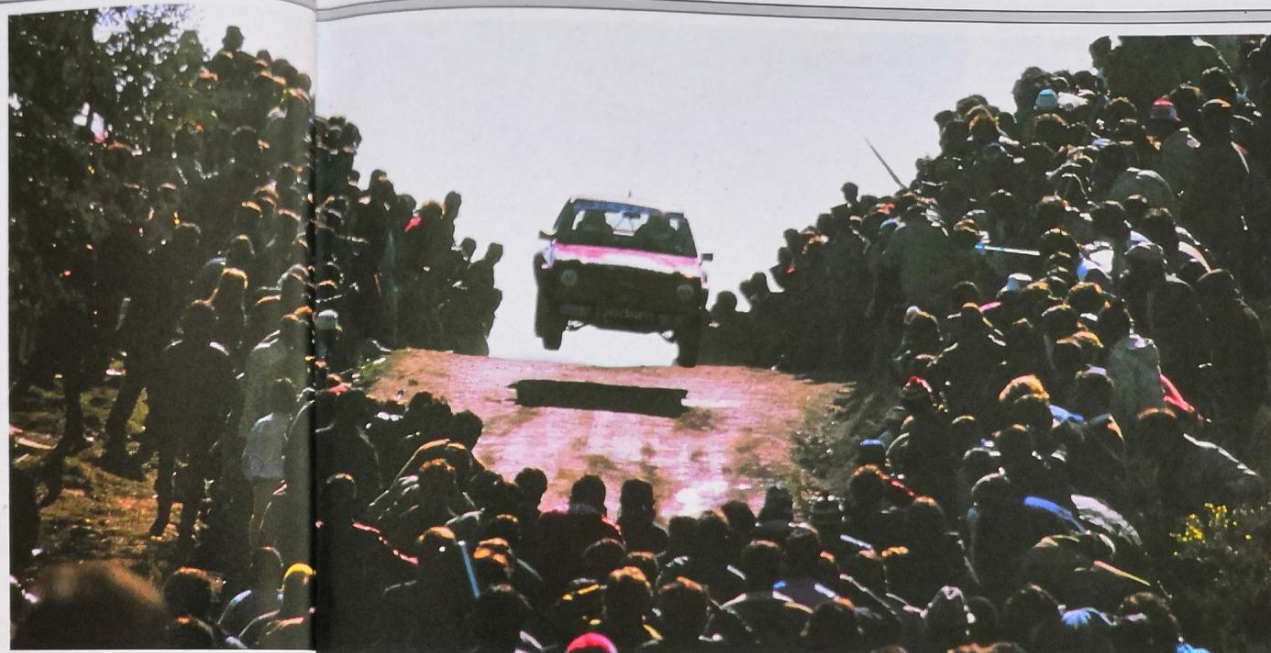
As a result, crews have suddenly become aware of the power they possess but also of the responsibilities they bear. Indeed, they have not tried to avoid those responsibilities and their action is aimed at safeguarding the future of their sport.

One thing that they tried to make clear was the exceptional nature of their action. In an effort to reassure the organisers of other World Championship events, they insisted on the specific problems encountered in Portugal. At the same time, they excluded the possibility that it is with the technical characteristics of today's cars that lies the blame. Of that they are convinced, even if some observers are not quite so sure.

As they came out of the room where they had held their long meeting, the crews looked sad, upset and deeply moved by what had happened whilst, at the same time, they appeared proud of the way they had acted spontaneously as one body. And so they should. But, however bold and far reaching their initiative may have been, we are still a long way from finding the answers to the problems highlighted in Portugal. Wherever rallies take place there is always the risk that an incident of this sort can happen. Educating the public is definitely one of the priorities but hardly the ultimate solution in itself. The problem has become steadily more alarming over recent years as our sport has increased in popularity. Should we be hoping that the public loses interest in rallying?

It looks as though no answers will be immediately forthcoming since the success of rallying is, to a great extent, due to the fact that spectators can get very near to the cars, at liberty to choose where they watch from and free to organise their own itineraries to follow the show. In any case, the drivers deserve respect for what they did. They have taken the first step. It is now up to everybody involved in the sport to make sure that rallying will survive.

These two photos were taken from exactly the same spot. One was taken in 1985, the other this year. Could it be that this year's tragic accident has had an effect on the ardour of the Portuguese spectators. The lack of spectators in the more recent picture could be explained by the fact that the leading crews had already pulled out but note how everybody is standing well back from the side of the road. All we can hope is that the public has learnt the lesson.



March 1986

hit some spectators and that Joaquim Santos had been off the road, killing three people. They didn't know that it was already too late.

We caught up with Marc Duez at the start of the third stage. The crew of the third official Metro were the first competitors to arrive on the scene of the accident, first to witness the gravity of Santos's accident just one minute earlier. Nearly an hour later, the Belgian pair were still pale from the experience.

"We passed at reduced speed and had plenty of time to see that the RS200 had hit the rockface. The crew were still inside the car but about twenty or so people were laid on the ground, some squirming, some motionless. It was horrible."

Marc's initial reaction was to stop but he thought it would be more useful to continue to the stage finish to inform the organisers. Ten minutes went by before the stage was interrupted. Franz Wittmann was next on the scene and did not hesitate to stop to help. However, the spectators immediately turned on him and his VW Golf, attempting to break his lights and windscreen. The Austrian driver had no other choice than to drive off. The drivers of the Fiat Uno Turbos had the same story to tell.

"I drove off to save my skin," explained Franz Wittmann later. "I understand the spectators though. They were there alongside friends and family who were badly in need of medical help and the rally continued as though nothing had happened. Most people would be furious in similar conditions. Rallying is just a sport after all."

At the first major service halt, a wierd atmosphere prevailed. Even the most talkative drivers and co-drivers remained silent, or locked themselves away inside their motorhomes. The traditional questions about how the cars were going, what were the tyres like, etc., were met with evasive answers as their importance faded into insignificance.

When quizzed about what their attitude was going to be after the restart, those that bothered to reply betrayed the feelings of most of the professional drivers, "If we restart!" Some drivers wandered about looking for their colleagues. Markku Alen parked his Lancia next to the spot where the Peugeotts were being serviced. There was a brief conversation between the three Finnish drivers, Alen, Kankkunen and Salonen. Eventually all the leading crews met up at the time control. Two words were exchanged between Walter Röhrl and Alen. Then the Finn, visibly relieved, turned round and announced, "OK, we're not going to restart." An enormous weight had suddenly been lifted from his shoulders.

The rally had in fact been interrupted after the passage of the 21st car through the first stage. The other cars were still waiting at the stage start, waiting for further instructions. As a result, the majority of the drivers grouped with Markku Alen were professionals, the works drivers. They were all of the same opinion



and equally determined not to go back on their decision. At the time, it was only a question of refusing to tackle the Sintra stages a second and third time, but the situation evolved very quickly.

THE ORGANISERS REACT

Cesar Torres, organiser of the Rally of Portugal, was quick to realise that he had no other choice than to cancel the remaining Sintra loops. He acknowledged the crews arguments and announced

the interruption of the event. One by one, competitors checked into an improvised parc-fermé. Calmly and clearly, but with no intention of modifying their position, the crews explained the reasons behind their decision. Whichever driver you chose to talk to, you got the same, if not identical reply. "Without exception, we all think along the same lines. We are drivers, not murderers. A further accident like that of Joaquim Santos could easily happen again. When we get back to our respective countries, we can guess what the journalists are going to say."

— What did you do when you got word of the accident?
— Nothing, we carried on...
— And what happened?
— There was a second accident...
"We never want to have to give answers like that. We are deeply aware of the value of a human life and the sorrow that death can cause to the friends and relatives of victims. Do you remember the football match in Belgium last year? It was scandalous to let the match take place after the deaths of all those fans. We want to make it clear that rally drivers aren't like that!"

Gradually, the crews became aware that it was necessary for them to get together to make an official announcement and to make public the real reasons behind their decision. Things were already very clear in the Ford camp. Peter Ashcroft had telephoned Stuart Turner in England. Without hesitation, the Ford Europe competition manager took the decision to withdraw the two remaining RS200s. In fact, it was an integral part of the Ford drivers' contracts to retire if ever they thought that the security of spectators was at risk.

After the tragedy of the first stage, the factory drivers took a unanimous decision to withdraw, judging the Rally of Portugal too dangerous.

THE RALLY

Timo Salonen was first on the road. Towards the middle of stage 1, the rear end of the Peugeot 205 slid out, injuring a number of spectators who were standing next to the road. Kalle Grundel had a puncture at the end of the same stage. Toivonen, Alen and Röhrl were equal fastest on that test with a time of 2m 15s for 5km. In spite of their problems, Salonen and Grundel were only a second slower. Portuguese driver, Joaquim Santos left the road violently and his car went into the crowd. Marc Duez was next on the road and completed the stage at reduced speed, as did the following competitors until the stage was stopped.

The leading drivers were unaware of the incident and the rally continued. The Lancias dominated the proceedings and the three Deltas were fastest on Sintra. After this stage, Biasion was leader with a second advantage over Alen, 2s over Toivonen, 8s over Kankkunen and 9s over Röhrl. Malcolm Wilson appeared to be in excellent form, in sixth place, 16 seconds behind Biasion and 1s ahead of Salonen whose heart wasn't really in it after his incident on SS1.

In fact, the World Champion wasn't the only driver to be upset by the massive spectator presence. They all feared that other accidents could happen and decided not to restart the Sintra loop of stages. The organisers accordingly cancelled Sintra but, when it came to restarting the rally and heading north, the professional drivers had unanimously decided to withdraw.

Local Renault driver, Joaquim Moutinho inherited the lead and was not to be challenged for the rest of the event. Two of the Group A Fiat Uno Turbos retired fairly quickly, Rayneri after an off and Fiorio when his transmission broke, but Del Zoppo held on to second place for a long spell before being overtaken by the Lancia 037 of Carlos Bica. Bica had been handicapped early on by inadequate suspension and a lack of brake pads.

Tchine spent most of the rally in third position until he too was passed by Bica and then by an excellent Ortigao. Klaus Fritzing was a candidate for a place on the podium but the unfortunate 49 year-old German was forced to retire with gearbox problems. Couloumies experienced no problems on his way to victory in Group N with his Peugeot 205 GTI.



Carlos Bica's climb back up the leaderboard to finish second was one of the highlights of an otherwise soulless rally

"When we announced our return to World Championship rallying," announced Peter Ashcroft, "we made it clear that we were worried by the spectator problem. We even quoted Portugal as an example. We came nevertheless. It is a tragic twist of irony that our doubts have proved to be grounded."

COMPLETE BOYCOTT

Did Ford's reaction have a sub-conscious effect on the other teams? The fact is that the decision not to continue the Sintra loop was suddenly transformed into a refusal to continue the rally. "We have to set the example. We have got to make sure that spectators here in Portugal and elsewhere in the world are aware of the dangers involved."

"For years now we have tried to make it clear to the organising team of the Rally of Portugal that it was imperative that steps be taken to reduce the likelihood of a fatal accident here. Possibly we should have reacted sooner but the situation this year is much worse than

ever before and it is never too late to do something."

As soon as they got back to rally headquarters at Estoril, crews locked themselves away. They immediately understood that they all felt the same way. Not one person suggested that they restart the rally, the only worry was how to put over their feelings to their respective team-managers, to the press and to the public. The team-managers were soon asked to join in the drivers' meeting and discussions lasted two hours.

If there were any managers that thought they were going to persuade the crews to change their minds, then they understood very quickly that it wasn't worth even trying. "We are pleased with the way our 'bosses' reacted," announced the drivers. "They were ready to listen to our arguments and they soon understood that we meant business. They fully support our action."

As they left their impromptu meeting, the crews still appeared to be under the shock of what had happened but they also gave the impression that they were proud of their decision. "During the meeting, we debated whether we were

going to restart only to retire a few minutes afterwards, a solution which would have left us less prone to possible disciplinary action from FISA. The possibility was rejected on the grounds that it is imperative that we demonstrate the courage of our convictions."

They even took the time to prepare an information bulletin, further proof that they were totally conscious of the consequences of what they were doing. After underlining their respect for the families of the victims, they went on to point out the exceptional circumstances that exist in Portugal. In an effort to reassure the organisers of subsequent World Championship rounds, they made it perfectly clear that they feel that the Rally of Portugal is a unique case because the spectators are not happy just to line the route, they want to be on the track itself. "There are a number of delicate spots on many other rallies but they are generally well known and we are prepared for them. Here, the dangers exist every inch of every stage, even if we stay in the road."

Another potential argument was similarly rejected. The drivers were anxious

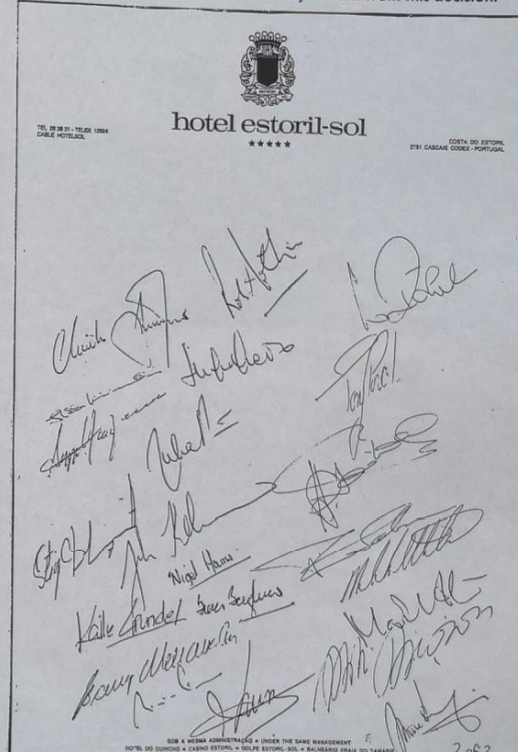
to point out that neither the speed, nor the power of today's cars can be blamed for the accident. "Limiting power would not eliminate the risks. The handling characteristics of today's cars are so sophisticated that we would still be able to take bends at the same speeds. Furthermore, we would have no spare power available if ever we needed to get out of a tricky situation."

Another decision taken by the professional drivers was that they would meet before each event in order to inform the organisers of their comments and suggestions. It is very probable that a drivers' association be founded but it was decided to look into that possibility at a later date so as not to be affected by the emotion of the incident in Portugal. "You just can't imagine what it's like being in a racing car, your foot hard down to the floor, with people everywhere, crossing the road in front of you, trying to touch the car. Your immediate reaction is to brake but at the same time the seconds are ticking away. I don't ever want to live through that again." Those were Timo Salonen's words as he left Portugal. Will he ever return? ■

DRIVERS' STATEMENT

The reasons that all the undersigned drivers do not wish to continue with the Portuguese Rally are as follows:

1. As a mark of respect for the families of the dead people and for those injured.
2. There is a very special situation here in Portugal: We feel it is impossible for us to guarantee the safety of the spectators.
3. The accident on Stage 1 was caused by the driver having to try to avoid spectators that were in the road. It was not due to the type of car nor the speed of it.
4. We hope that our sport will ultimately benefit from this decision.



THE STEWARDS ARE SATISFIED!

"The stewards of the Rally of Portugal, having met today at 11h30 at Povoa de Varzim, have taken note of the circumstances concerning the tragic accident which happened during the first stage.

"The stewards are totally satisfied with the quality and efficiency of the emergency services present and that the organiser's medical team, together with 12 ambulances, evacuated the 33 victims of the incident in the fastest possible delays.

"The stewards are totally satisfied with the decision taken by the clerk of the course to continue the running of the event in the conditions planned by the organisers, the good work of whom merits a particular mention.

"The stewards have noted, not without emotion, the collective decision taken by a certain number of FISA graded drivers not to start the 2nd section of the first leg. The stewards believe that their attitude could be prejudicial to the image of the Rally of Portugal, as well as to the World Rally Championship.

"Consequently, the stewards request that this dossier be transmitted to FISA in its entirety."

Time between the moment of the accident and the interruption of the rally: 13 minutes.

Time between the moment that Marc Duez informed the organisers of the incident, at the end of the stage, and the interruption of the event: 10 minutes.

Time between the moment of the accident and the arrival on the scene of the first ambulances: over 20 minutes.

The accident occurred just one and a half kilometres from the stage start and the stage itself was only five kilometres in length.

RALLY OF PORTUGAL



Monaco driver, 'Tchine', must be one of the most experienced amateurs in the World Championship. It is unlikely that he will ever finish higher than fifth on a WRC round

S T A T I S T I C S

TECHNICAL DATA

20th Rally of Portugal
Date: 5th-16th March, 1986.
3rd round of the World Championship for makes, 3rd round of the World Championship for drivers and 3rd round of the World Group A Championship.
Start: Estoril.
Finish: Estoril.
Route: Total length of 2470km divided into 4 legs. Total stage length planned: 703km. Only 659km of stages actually covered.
First leg: Povoa de Varzim-Povoa de Varzim, Wednesday, March 5th 09h00 to Thursday, March 6th 06h00. Total distance 797km including 185km tarmac stages. Finally only 11 stages (141km) were covered.
Second leg: Povoa de Varzim-Povoa de Varzim, Thursday, March 6th, from 14h00 to 23h30. Total distance 426km including 10 stages (151km), all on tarmac.
Third leg: Povoa de Varzim-Viseu, Friday, March 7th, from 09h00 to 21h00. Total distance 497km including 13 stages (191km), one on tarmac and the rest on gravel.
Fourth leg: Viseu-Estoril, Saturday, March 8th, from 05h00 to 22h30. Total distance 750km including 8 gravel stages (176km).
Entered: 130. **Starters:** 110. **C continued after interrupt:** 71. **Finishers:** 35.
Weather: dry and mostly clear skies.

FOR THE RECORD

Rally: Notable increase in the percentage of tarmac stages to give a perfect 50/50 balance between tarmac and gravel.
Drivers: First World Championship victory for Joaquim Moutinho. First victory of a Portuguese driver in the WRC series. Joaquim Moutinho, Carlos Bica and Gianni Del Zoppo become A-graded drivers. First works drive for Marc Duez (Metro 6R4) in the World series. All professional crews withdrew from the event after 3 stages on the grounds that they could not guarantee the safety of the spectators.
Cars: First victory in the World Championship of a semi-private car since the introduction of Group B.

MAIN RETIREMENTS

SS1: Santos/Oliveira (accident).
 After SS3: Salonen/Harijanne, Kankkunen/Pirtonen, Alen/Kivimaki, Toivonen/Cresto, Biasion/Siviero, Röhr/Geistdörfer, Blomqvist/Berglund, Grundle/Melander, Pond/Arthur, Wilson/Harris, Duez/Lux, Eriksson/Diekman, Wittmann/Feltz (collective decision to pull out following the death of three spectators).
 SS11: Rayneri/Cassina (accident).
 SS23: Fiorio/Arles (transmission).
 SS44: Fritzinger/Lejeune (gearbox).

PAST RESULTS

(Last ten editions)
 1976: Munari/Maiga (Lancia Stratos)
 1977: Alen/Kivimaki (Fiat 131 Abarth)
 1978: Alen/Kivimaki (Fiat 131 Abarth)
 1979: Mikkola/Hertz (Ford Escort RS1800)
 1980: Röhr/Geistdörfer (Fiat 131 Abarth)
 1981: Alen/Kivimaki (Fiat 131 Abarth)
 1982: Mouton/Pons (Audi Quattro)
 1983: Mikkola/Hertz (Audi Quattro)
 1984: Mikkola/Hertz (Audi Quattro)
 1985: Salonen/Harijanne (Peugeot 205 T16)

WORLD RALLY CHAMPIONSHIP

(Drivers of Group A cars)

(Positions after 3 rounds)	19 points
1. Eriksson K. (S)	13 points
2. Oreille (F)	13 points
Eriksson M. (S)	13 points
Del Zoppo (I)	10 points
5. Pettersson (S)	10 points
Ortigue (P)	10 points
7. Bos (F)	8 points
8. Wittmann (D)	7 points
Fernandes (P)	7 points
10. Eriksson R. (S)	6 points
Johansson (S)	6 points



WORLD RALLY CHAMPIONSHIP

(Drivers)

(After 3 rounds)	28 points
1. Kankkunen (SF)	20 points
2. Toivonen (SF)	20 points
Moutinho (P)	20 points
4. Salonen (SF)	15 points
Alen (SF)	15 points
Bica (P)	15 points
7. Mikkola (SF)	12 points
Grundle (S)	12 points
Del Zoppo (I)	10 points
10. Röhr (D)	10 points
Eriksson M. (S)	10 points
Ortigue (P)	10 points

BEST RESULTS

	1	2	3	4	5	6	A	8
Moutinho	27	6	1	3	1	—	38	42
Bica	8	10	6	5	1	3	33	42
Ortigue	5	4	6	9	2	1	27	42
Alen	2	1	—	—	—	—	3	3
Del Zoppo	1	12	7	11	3	4	38	42
Toivonen	1	1	—	—	1	—	3	3
Biasion	1	1	—	—	—	1	3	3
"Tchine"	1	14	5	6	8	34	42	—
Röhr	1	—	—	—	1	1	3	3
Rayneri	2	1	3	9	6	21	37	—
Fritzinger	—	1	3	5	3	3	15	21
Sena	—	—	3	—	—	1	4	16
Fiorio	—	—	1	1	—	1	3	3
Kankkunen	—	—	1	1	—	—	—	—
Salonen	—	—	1	3	5	8	42	—
Couloumies	—	—	—	1	—	1	2	3
Grundle	—	—	—	—	—	2	2	3
Wilson	—	—	—	—	1	1	1	3

A: Number of placings in first 6.
 B: Number of special stages covered.

SUCCESSIVE LEADERS

SS1: Alen, Röhr and Toivonen.
 SS2: Alen.
 SS3: Biasion.
 SS10-SS48: Moutinho.

WORLD RALLY CHAMPIONSHIP (Makes)

(Positions after three rounds out of eleven)
 1. Lancia and Peugeot 37 points
 3. Audi 29 points
 4. Volkswagen 19 points
 5. Ford 14 points
 6. Citroën 10 points

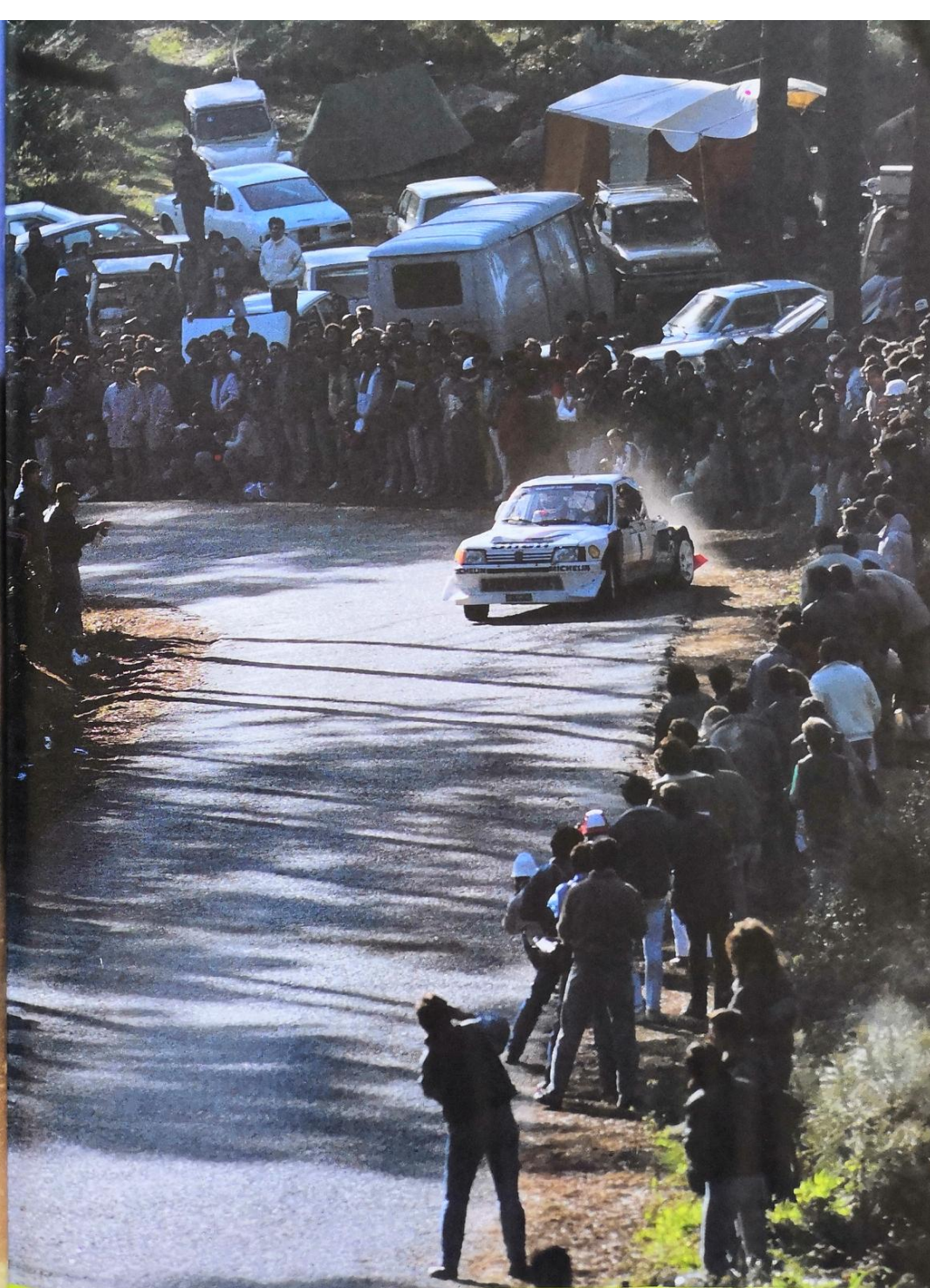
FINAL RESULTS

1. Moutinho/Fortes (Renault 5 Turbo)
 7 hours 50m 44s. (1st Group B)
 2. Bica/Junior (Lancia 037) 8 hours 04m 11s
 3. Del Zoppo/Roggia (Fiat Uno Turbo)
 8 hours 07m 36s (1st Group A)
 4. Ortigue/Perez (Toyota Corolla)
 8 hours 10m 36s
 5. Tchine/Thimonier (Opel Manta)
 8 hours 13m 04s
 6. Couloumies/Causse (Peugeot 205 GTi)
 8 hours 36m 27s (1st Group N)
 7. Fernandes/Monteiro (Fiat Ritmo 131)
 8 hours 40m 26s
 8. Recordati/Delorme (Opel Manta 400)
 8 hours 47m 31s
 9. Segurado/Prata (Renault 11 Turbo)
 8 hours 49m 18s
 10. Coutinho/Manuel (Toyota Corolla)
 8 hours 50m 44s.



Del Zoppo/Roggia (Fiat Uno Turbo) Photo A. Marzoli

AN EASY GP. A WIN FOR DEL ZOPPO AFTER VW'S WITHDRAWAL



Salonen/Harjanne (Peugeot 205 T16) Photo J.L. Taillade

SALONEN'S OFF ON SS1 WAS A WARNING OF WORSE TO COME



Duez/Lux (Metro 6R4) Photo A. Marzoli

MARC DUEZ' WRC DEBUT WITH THE 6R4 ENDED IN HORROR. THE BELGIAN WAS FIRST ON THE SCENE OF THE FATAL ACCIDENT



Photo J.L. Taillade

THE WORKS DRIVERS WERE QUICK TO REACT AS A BODY PICTURED HERE ON ARRIVAL AT THE FIRST REST HALT



Moutinho/Fortes (Renault 5 Turbo) Photo A. Marzoli

ONCE THE PROFESSIONAL DRIVERS HAD PULLED OUT, JOAQUIM MOUTINHO LED UNTIL THE FINISH



Ortigao/Perez (Toyota Corolla) Photo A. Marzoli

IT WON'T BE OFTEN THAT ORTIGAO FINISHES IN THE TOP FIVE OF A WORLD CHAMPIONSHIP EVENT WITH HIS TOYOTA GP. A



IN FOCUS

ARI VATANEN

THE IMPORTANCE OF FAITH

HE MUST HAVE TRIED A THOUSAND TIMES TO UNDERSTAND WHAT REALLY HAPPENED, TO RELIVE THE SECONDS THAT LED UP TO THE ACCIDENT IN ARGENTINA. BUT HIS MIND SIMPLY DRAWS A BLANK. ARI REMEMBERS NOTHING OF WHEN THE PEUGEOT WENT OUT OF CONTROL. ALL THAT REMAINS IS A CRUEL AND PAINFUL SCAR, THE PRICE OF A SECOND'S INATTENTION.

by Jean-Paul Renvoizé

Argentina 85....

The Peugeot helicopter has just lost sight of Vatanen and Harryman's 205 Turbo 16. An agile U-turn, and the two mechanics aboard spot a mangled pile of metal about five kilometres from the start of the stage. Spectators are already on the scene as the helicopter lands. Harryman is sitting on the roadside, his head in his hands. Vatanen is lying on his back: a first aid volunteer who happened to be nearby is keeping a watchful eye on the prostrate Finn.

"I tried to talk to him," remembers Carlos Dos Barros, one of the Peugeot mechanics. "His eyes were wide open and he was holding his leg. He didn't answer me and I quickly understood that it was serious. We decided it would be best to get him to the nearest hospital in the shortest possible time. The man who was watching over Ari explained where the hospital was and advised us on the best way of getting Ari and Terry into the helicopter. As a matter of fact, we laid them on the underbody guard that we had detached from the Turbo 16. All the equipment we had on board was thrown out to make more room and we headed off towards Rio Terceiro. Patrice stayed on the ground to look after the car and the tools. As soon as we had gained sufficient altitude, I called up Jean Todt on the radio and told him where we were heading without going into too much detail concerning the condition of the crew. I remember we were forced to land over 100 yards away from the clinic because of the

electricity lines that surrounded the building. Ari had regained consciousness and kept repeating "no more races, no more races" but he didn't seem to recognise anyone. The nurses were quickly on the spot and took him inside the clinic."

Jean Duby, Peugeot team doctor, was next on the scene and quickly announced that Terry Harryman's injuries gave no cause for concern. His spine had been damaged but nothing serious. On the other hand, Ari's state was worrying. He was suffering from a number of fractures, especially of the vertebrae. Furthermore, lung problems complicated the matter. It was decided to transfer him to Cordoba where the hospital was better equipped.

"THE WILL TO LIVE PULLED VATANEN THROUGH"

Jean Todt, who arrived very soon afterwards, described what he saw: "I caught up with Dr. Duby at the hospital in Cordoba where he told me that Ari had very nearly died during the transfer. When I arrived, they were taking X-rays, an hour later he was admitted to the reanimation unit. When I eventually got to see him, I could hardly recognise him. Someone said that I should speak to him, that it was vital that he wake up. And so I did. I talked non-stop. Eventually



ly he opened his eyes, recognised me and asked "Jean, will I be able to drive again?" before repeating over and over again "But why did I go off? Why?"

Saturday, August 3rd. A Lear 55 jet plane took Vatanen back to Europe. He was met at a Paris airport by his wife, Rita, and a French doctor. Terry Harryman, wearing a surgical collar, was transferred to Belfast and the Finnish driver flew on to Helsinki. On arrival in his home country, Ari was immediately operated on, his condition critical. On Thursday, his state was still critical, a slight improvement followed before Vatanen fell into a coma. The following day, it was thought that he was going to die, but on Saturday, August 10th, the will to live pulled Ari through, the fight was won.

Slowly but surely, Vatanen regained his strength in Helsinki General Hospital and, by the end of August, was able to receive visitors, a time which coincided with the 1000 Lakes Rally. A few weeks later, he was considered fit enough to return to his English home near Marlow in the Thames valley. Under no illusions that his convalescence period would be long, Ari's thoughts nevertheless became more optimistic.

In December, Vatanen was even able to make the journey to Paris for the annual Peugeot press conference. Still weak

and still with a lot of weight to make up, he had lost the use of his left foot and needed a cane to walk about. A nerve had been severed in the accident and, during a stay in Finland in January, the surgeon that had carried out the operation the previous summer could only prescribe courage and patience.

"RALLIES ARE BECOMING MORE LIKE FORMULA 1 RACES"

The exceptional talents of the 1981 World Champion and 10 times winner of World Championship rallies were spotted early on at a time when Vatanen was also making a reputation for himself as a car-breaker. "It's true, the beginning of my career was punctuated by a number of accidents, a distinction that has remained with me to this day. You shouldn't forget that I was very young when I became a works driver and when you're young like that in a top car, you try to go as fast as possible and that means taking risks."

Up until the 1984 Tour de Corse, his first event with the Peugeot 205 Turbo 16, the dangers involved in leaving the

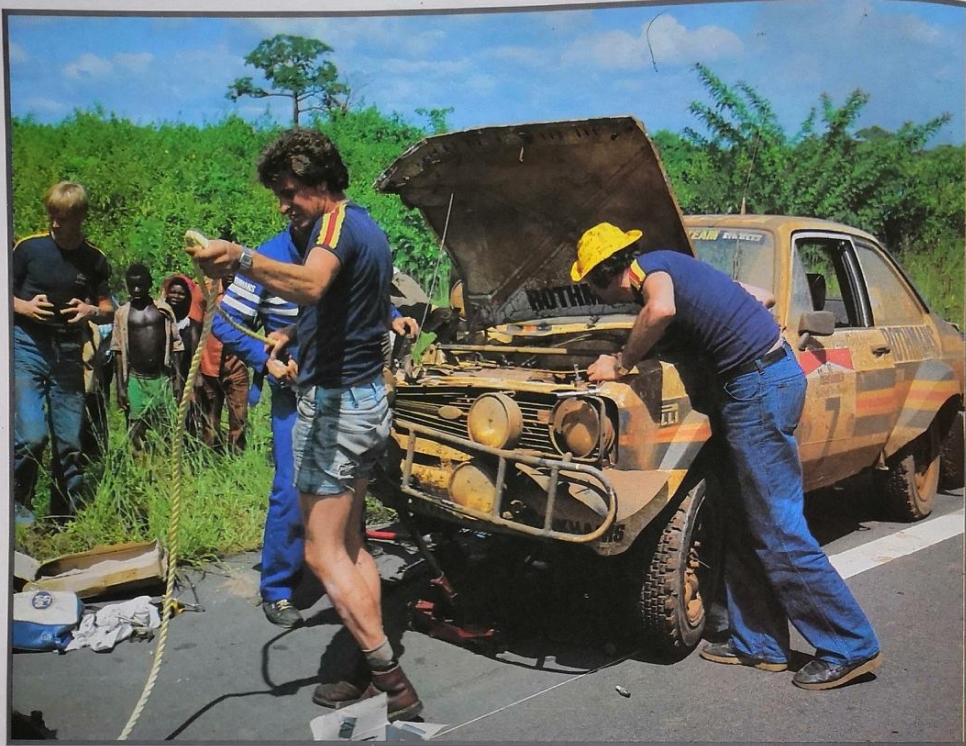
Vatanen won his World title in 1981 with the Rothmans Escort. "In those days you could commit an error and get away with it."

Vatanen was hurt for the first time in a rally on the Tour of Corsica last May.

road were relatively limited, a risk it was easy to live with. Ari's own words, taken from GPI No 82, demonstrate perfectly how his attitude suddenly changed after the accident in Corsica:

"... Rallies are becoming more like Formula 1 races. At today's speeds you just can't afford to make a mistake. In the days of the Escort, you could commit an error and generally get away with it. Nowadays you've got to drive cleanly. My accident in Corsica had a marked effect, physically and morally, on both myself and my wife, Rita. To see the burnt out skeleton of the Peugeot afterwards was frightening. When I remember the drop, the car rolling and then in flames, it makes me shudder. I have often asked myself since how it actually happened and reflected on how just a split second's lack of concentration can have such dramatic consequences. In fact, it's exactly that, a question of





concentration. I am no longer upset by the incident but that is mainly thanks to my wife and the Peugeot team. Rita has been a great help psychologically, we understand each other perfectly. Also, when I returned home, you could never believe how happy I was to see my children again, to hear them laughing, just being with them."

"AT LEAST I DON'T NEED MY WALKING STICK ANYMORE"

It is an uncanny coincidence that it was during the same event twelve months later that Ari was hurt for the first time in a rally when he went off the road, the Peugeot coming to a halt in the undergrowth some thirty yards down the mountainside.

"The inside of my thigh was cut and I had a slight fracture, nothing very serious though since I was fully fit in time for the Acropolis shortly afterwards."

— I saw a film of the accident and it sent a shiver up my spine...

"I'm not surprised, it could have been very serious and it's a miracle that I wasn't more badly hurt. As you know, I have often had offs in the past but I don't think I've ever been so scared

before. Except perhaps last year in Corsica."

— In Argentina, did you see the accident coming?

"Not at all, I can't remember a thing. I think Terry has a vague recollection but I've never asked him to tell me about what happened. I recall that there was nothing I could do to avoid going off, that I couldn't have stopped the car rolling but sometimes I wonder if that's just because of what people have told me since. I only know that it wasn't the same sort of accident I had had in Corsica, even if the violence of the incident was similar. The consequences weren't the same either."

— How's your convalescence period going?

"Very, very slowly although I am starting to feel better. I feel less weak and I've put on quite a lot of weight. I'm at around 78, 80 kg, not far off my ideal weight. Otherwise, it's obvious that everything's not alright. I underwent two operations. One of the operations was to allow the severed nerve to eventually grow again but, for the moment, there is no improvement. It is possible that they will operate on me again soon but the nerve could take a long time to put itself right. At worst, I could be handicapped for life, they just don't know for the moment."

The Finn's reputation for accidents has followed him throughout his career. Here, he has just been hit by a lorry on the 1981 Ivory Coast. The mechanics got him going again to finish 9th, clinching the World title.

— Can we expect to see you back in action sooner or later?

"I can move my leg but not enough to drive properly. Thanks to physiotherapy, my knee is much better now but still not 100%. At least I don't need my walking stick any more. However, I can't move my left foot at all, I have no control whatsoever over it. So you can see, there's no chance of me competing again for a while. I've tried to drive a car with a manual box but I just haven't got the strength. When I go for my daily physiotherapy sessions twenty minutes away in Slough, I take an automatic."

— How do you feel psychologically?
"Well, but I think that my chances of driving in rallies again are very slim. I've just got to accept the situation, I've got no choice. To drive a rally car competitively, you've got to be at 100% and I'm not. Of course I hope that one day I'll be



Peugeot recognise that Ari Vatanen, pictured here on his way to victory on the '85 Swedish, was a major influence on their recent success.

able to compete again. You know that I love the sport, but you've got to live for the present. Don't worry, if ever my left leg fully recovers, I'll drive again."

— How do you spend your time?
"Every morning I go for re-education exercises near Slough, from 8h30 till 13h00. Afterwards, I return to the house before going to pick up my daughters from school at 15h30. With the girls at home, time goes by very quickly. I'm up to date with all the kids' programmes on the tele. Otherwise I don't read much, I stay about the house. It's a completely new lifestyle."

— Do you ever feel like getting involved in a rally?

"I think that I would be too frustrated if I went to follow a rally, I prefer not to. I spent some time in Finland in January and, since then, I have been to Paris to see Jean Todt who has been kind enough not to forget me."

— What is your opinion of the recent tragedy in Portugal?

"Most people could see it coming. It is high time that something is done about the problem, like avoiding organising stages near densely populated areas and making a concerted effort to educate and inform the public. They are totally unaware that cars like the Peugeot 205 T16 are veritable F1 machines. To my mind, informing the public is top priority. It's sad to see that only a fatal accident has any sort of effect on their antics! A Portuguese friend of mine told me that the popular press over there are blaming the drivers for the incident. That's stupid, they should be criticising the lack of discipline of their own spectators. I for one totally approve of the professional drivers' decision to pull out. They were quite right!"

"FOR ME, FAITH IS A SORT OF LIBERATION"

— Despite not being with your fellow drivers; you share their feelings...

"Yes, I do feel isolated but what else can I do. At the moment my life is changing

because I am putting so much effort into trying to live like before. I put all my energy into my re-education sessions, that's the only way I can actively do something about my future."

As a journalist, it is difficult to talk about someone you know well without letting friendship influence what you write. It's not easy either asking questions, the answers to which you know beforehand. So I'll leave the last word to Ari, talking here recently to Cyril Frey about a subject which is dear to his heart:

"Why are we here? Where do we come from and where are we going to? Those are questions I no longer ask myself, my mind is at rest. Some people find it strange that I have no qualms about making my personal convictions public but, in a way, I believe that I could be helping others. There's nothing mysterious in that. Scientific progress has corrupted man's minds, they believe that man dominates nature but that can, and never, will be true. The human race is capable of great achievements but the basic questions remain unchanged. One day, we will leave this earth. There is no doubt about it. For me, faith is a sort of liberation." There can be no doubt that, for Ari Vatanen, faith has been of immeasurable importance over the last few months.

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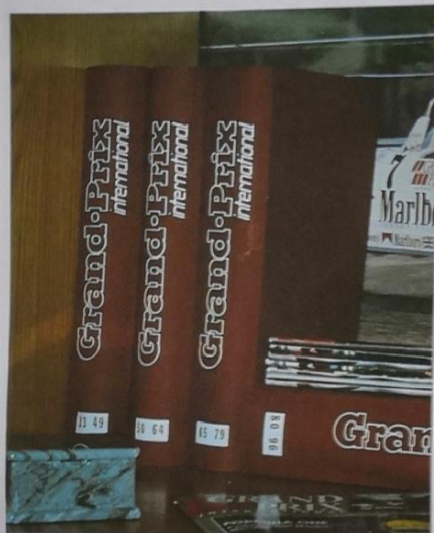
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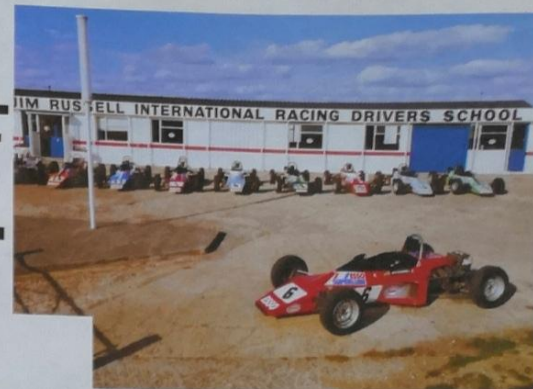
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